



ST. XAVIER'S TECHNICAL INSTITUTE | Mahim, Mumbai - 400016

ST. XAVIER'S TECHNICAL INSTITUTE

Department of Electronics & Telecommunication (DETC)



PRESENTED BY

Dr. Vijay R. Rathod | HOD EXTC, PhD IIT Roorkee
Presentation for NBA Expert Committee



**DEPARTMENT OF
ELECTRONICS & TELECOMMUNICATION**

Welcomes

NBA Expert Team



OVERVIEW



- 01 ➤ Introduction
- 02 ➤ Department Achievements/ Recognitions
- 03 ➤ Vision, Mission and Program Educational Objectives
- 04 ➤ Program Curriculum and Teaching–Learning Processes
- 05 ➤ Program Outcomes and Course Outcomes
- 06 ➤ Students' Performance
- 07 ➤ Faculty Information and Contributions
- 08 ➤ Facilities and Technical Support
- 09 ➤ Continuous Improvement
- 10 ➤ OBE Philosophy of the Department





PART I

INTRODUCTION



INSPIRE



INNOVATE



EXCEL





Faculty Profile

14

Total Faculty Members

04/03

PhD Holders/Pursuing

05/02

With Master's/Graduate

The department has a well-qualified team with expertise in **Electronics, Telecommunication, Control Systems, IoT, and Computer Networks**. Faculty are actively engaged in research.

Library Resources

15,577

Total Books (incl. Book Bank)

6,347

Number of Titles

The library includes **12,244** department books + **3,333** Book Bank books, covering all aspects of Electronics and Telecommunication Engineering. **13 journals** are subscribed.

Departmental Strengths at a Glance



Academic Autonomy

Since 1994-95



Optimal SFR

30:1 Student-Faculty Ratio



10 Modern Labs

Well-equipped across 4 floors



AICTE Approved

All programmes approved



Heritage Institution

Established 1937, 88+ years



Industry Connect

Ties with DTE and MSBTE

120

Student Intake

Since 2008

272

Current Students

Year 2025-26

13

Faculty Members

04 PhD | 05 Masters

30:1

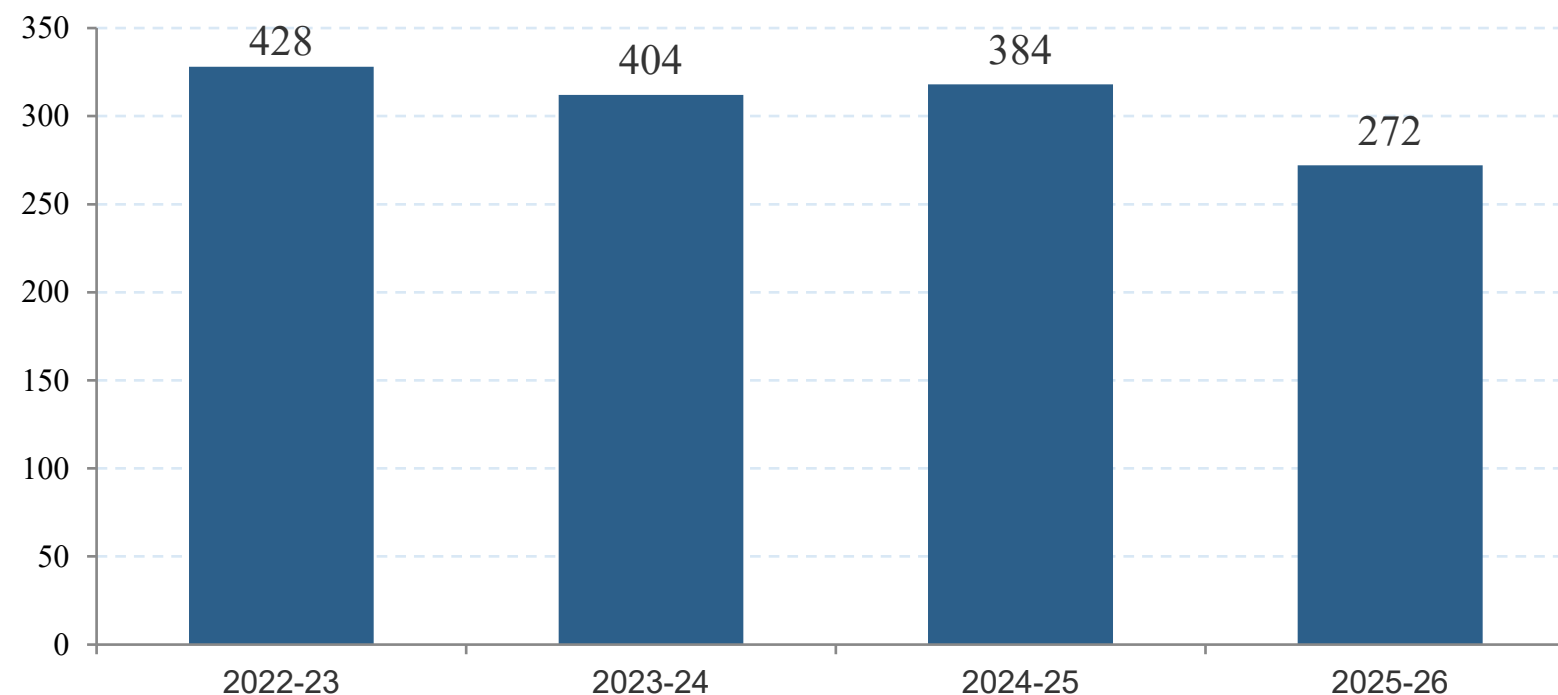
Student-Faculty Ratio

Optimal Learning Environment

Programme Offered

Diploma in Electronics & Telecommunication (DETE) | Academic Autonomy Awarded in 1994-95 | Recognized by DTE Maharashtra & AICTE

Student Enrollment Trend



Library Resources

15,577

Total Books (incl. Book Bank)

6,347

Number of Titles

13

Journals Subscribed

12,244 department books + 3,333 Book Bank books covering all aspects of Electronics and Telecommunication Engineering.



ST. XAVIER'S TECHNICAL INSTITUTE
Mahim, Mumbai - 400016

DEPARTMENT ACHIEVEMENTS/ RECOGNITIONS

Celebrating Excellence. Inspiring Innovation.



EXCELLENCE

Recognizing outstanding performance and achievements.



RECOGNITION

Honoring the efforts and contributions of our faculty and students.



GROWTH

Achieving milestones that reflect our continuous progress.

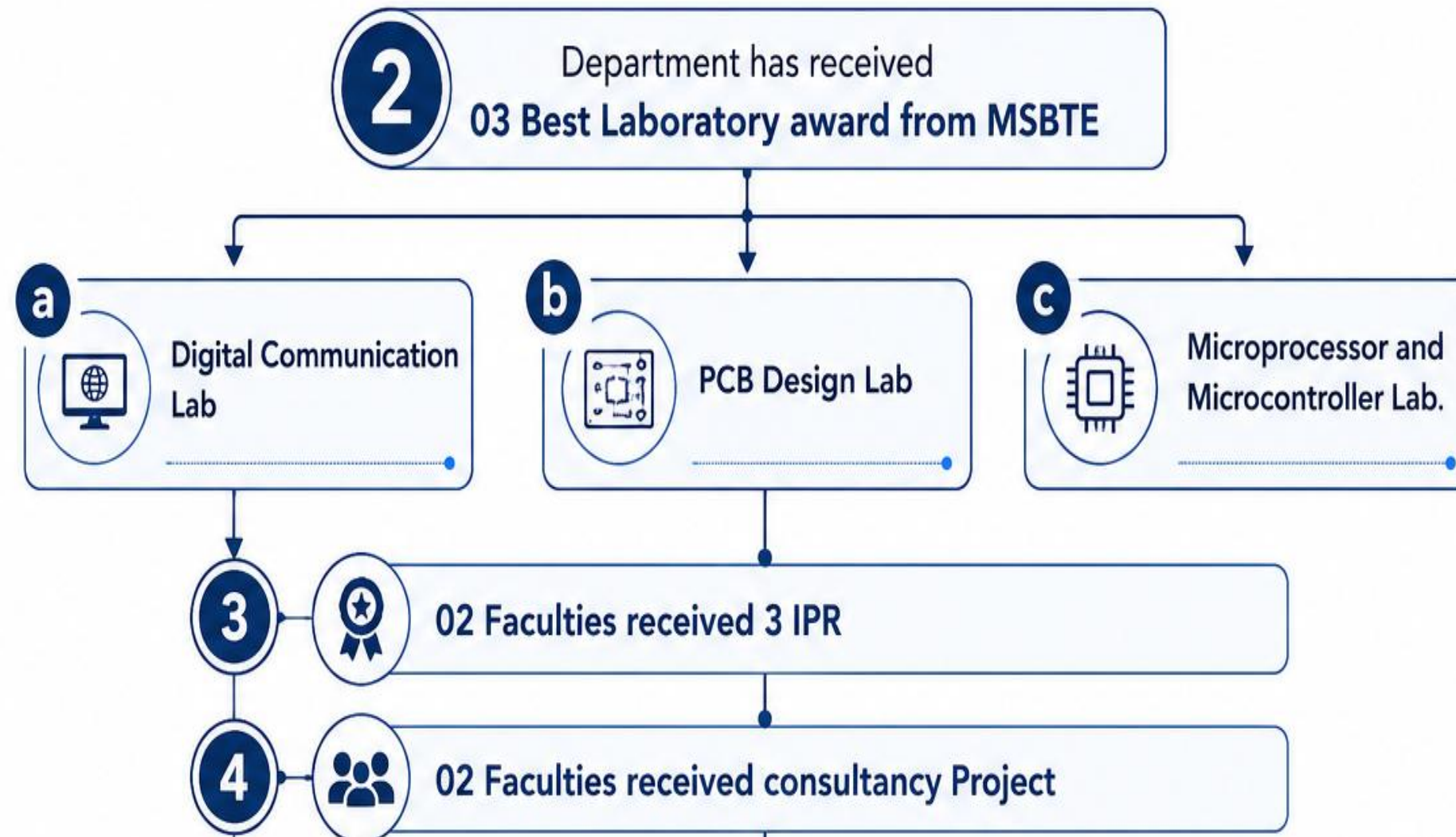


IMPACT

Making a difference through knowledge, innovation and service.



DEPARTMENT LEVEL





MSBTE Best Laboratory Award

"Promoting Laboratory Development"

Certificate of Appreciation

Awarded to Analogy & Digital Communication Lab of Electronics & Communication of St. Xavier's Technical Institute, Mahim, Mumbai

in recognition of having adopted the Best Laboratory practices for the year

2015-16.

V. Polvekar
Secretary
MSBTE

V. Polvekar
Director
MSBTE



MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION

(Autonomous) (ISO 9001:2015) (ISO/IEC 27001:2013)
Govt. Poly. Bldg., 4th floor 49, Kherwadi, Bandra (East) Mumbai - 400 051.
Tel : (022) 26471255 (O) Fax : (022) 26473980
Email : director@msbte.com Web : www.msbte.com

No. MSBTE/D-55/BLA/2017-18/ 7752 Date : 10 OCT 2019

Web Circular

Sub.: Declaration of Winners of the Best Laboratory Awards for 2017-18.
Ref.: This office web circular MSBTE/D-55/B.L.A./2017-18/518, dtd. 21.01.2019.

With reference to the above subject, MSBTE has initiated measures to promote academic excellence at its affiliated Polytechnics. Accordingly, in order to promote Laboratory development, encourage practical conduction with satisfactory output from equipment and their utilization, MSBTE launched the MSBTE "Best Laboratory Awards" since 2014-15.

The award carries a cash prize of Rs. 50,000/- and a certificate of appreciation to each selected laboratory of an institute. The amount shall be utilized by the institute for further development of the laboratory. Ten such awards were to be awarded.

Online applications were invited from eligible institutions as per under reference. Applications from 22 institutions were received and only 10 were found primarily eligible. After verification by expert teams, only three laboratories were found to have qualified for the award. Accordingly, the undersigned is pleased to announce Best Laboratory Award for 2017-18, to the laboratories of respective departments of respective institutes mentioned in the table below with prize amount.

Sr. No.	Name of Institute	Region	Department	Name of Laboratory	Prize Amount
1.	Government Polytechnic, Pune. (0006)	Pune	Information Technology	Software Engg. Laboratory-4	Rs.50,000/-
2.	Government Polytechnic, Nashik (0029)	Aurangabad	Electrical Engineering	Electrical Machines Lab	Rs.50,000/-
3.	St. Xavier's Technical Institute, Mumbai (0175)	Mumbai	Electronics & Telecommunication	Microprocessor & Microcontroller Lab	Rs.50,000/-

MSBTE herewith congratulates the awardees and other participant institutes who have missed the same by a small whisker.

It's observed from the number of awardees that, many institutes have failed to apply online for the awards or have submitted incorrect data online. It's hence expected from head of institutes, to elate the significance of award in true spirit whenever invitation for the purpose is released.

V. Polvekar
(Dr. Vinod M. Mohitkar)
Director

M.S. Board of Technical Education,
Mumbai.

Copy to :

1. Secretary, Maharashtra State Board of Technical Education for information.
2. Dy. Secretary, RBTE Mumbai, Pune, Aurangabad for information.



MSBTE's "BEST LABORATORY AWARD"

Promoting Laboratory Development

Certificate of Appreciation

Awarded to Circuit Simulation and P.C.B
Laboratory of Electronics & Communication of St. Xavier's

Technical Institute, Mahim, Mumbai

in recognition

of having adopted the Best Laboratory practices for the year 2014-15.

V. Polvekar
Secretary
MSBTE

V. Polvekar
Director
MSBTE

STUDENT LEVEL



**33 students papers
published / awards /
recognition received by
project at state / national level**

Sr.	Name of Student	College name	Name of event	Details of event	Result
1	ABBAS DAWOOD DAMANIYA	Vivekanand Education Society's Polytechnic College Chembur, Mumbai 400071	TECHNOTHON 2024	TECH CRACKER-GRAND FINALIST OF TECHNOTHON 2024- A24 HOURS INTER COLLEGE HACKATHOPN	certificate of appreciation
2	ABBAS DAWOOD DAMANIYA	Vivekanand Education Society's Polytechnic College Chembur, Mumbai 400071	TECHNOVATION 2024	STATE LEVEL TECHNICAL PAPER PRESENTATION 02-03-2024	certificate of appreciation
3	ABBAS DAWOOD DAMANIYA	Maharashtra State Board of Technical Education (MSBTE) bandra , Kherwadi	state level technical paper presentation competition	31/01/2024 Academic year 2023-24	second prize
4	ABBAS DAWOOD DAMANIYA	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	FIRST PRIZE
5	ABBAS DAWOOD DAMANIYA	DIPEX 2024	AUTONOMUS DISASTER RESPONSE DRONE	PROJECT THEME MOBILITY -7TH-10TH MATCH 23024	certificate of participation
6	ABBAS DAWOOD DAMANIYA	TSEC THADOMAL SHAHANI ENGINEERING COLLEGE	ROUND 1-TECH-A-THON HARDWARE HACKATHON	PROJECT ----- 10TH FEB 2024	certificate of participation
7	ASHISH GUPTA	TSEC THADOMAL SHAHANI ENGINEERING COLLEGE	ROUND 1-TECH-A-THON HARDWARE HACKATHON	PROJECT ----- 10TH FEB 2024	certificate of participation
8	ASHISH GUPTA	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	certificate of participation
9	ASHISH GUPTA	DIPEX 2024	AUTONOMUS DISASTER RESPONSE DRONE	PROJECT THEME MOBILITY -7TH-10TH MATCH 23024	certificate of participation
10	UPENDRA MEHER	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	second prize
11	BHARUDAS TUKRUL	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	second prize
12	SATISH TAKLE	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	second prize
13	AASTHA POOJARY	TSEC THADOMAL SHAHANI ENGINEERING COLLEGE	ROUND 1-TECH-A-THON HARDWARE HACKATHON	PROJECT ----- 10TH FEB 2024	certificate of participation
14	AASTHA POOJARY	SVKM's Shri Bhagubhai Mafatlal Polytechnic	TECH FAIR '24	STATE LEVEL TECHNICAL PAPER PRESENTATION ON 6-3-2024	certificate of participation
15	AASTHA POOJARY	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	THIRD prize
16	AASTHA POOJARY	VIDYALANKAR POLYTECHNIC	V-TECHNOVATION	3D-PRINTER---STATE LEVEL PROJECT COMPETITION 2	certificate of participation
17	DEVASHREE SURVE	Vivekanand Education Society's Polytechnic College Chembur, Mumbai 400071	TECHNOTHON 2024	TECH CRACKER-GRAND FINALIST OF TECHNOTHON 2024- A24 HOURS INTER COLLEGE HACKATHOPN	certificate of appreciation
18	DEVASHREE SURVE	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	THIRD prize
19	SOUMAY KISHOR JAWADE	Maharashtra State Board of Technical Education (MSBTE) bandra , Kherwadi	state level technical paper presentation competition	31/01/2024 Academic year 2023-24	second prize
20	SOUMAY KISHOR JAWADE	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	FIRST PRIZE
21	SOUMAY KISHOR JAWADE	DIPEX 2024	AUTONOMUS DISASTER RESPONSE DRONE	PROJECT THEME MOBILITY -7TH-10TH MATCH 23024	certificate of participation
22	SOUMAY KISHOR JAWADE	Vivekanand Education Society's Polytechnic College Chembur, Mumbai 400071	TECHNOTHON 2024	TECH CRACKER-GRAND FINALIST OF TECHNOTHON 2024- A24 HOURS INTER COLLEGE HACKATHOPN	certificate of appreciation
23	SOUMAY KISHOR JAWADE	TSEC THADOMAL SHAHANI ENGINEERING COLLEGE	ROUND 1-TECH-A-THON HARDWARE HACKATHON	PROJECT ----- 10TH FEB 2024	certificate of participation
24	SOUMAY KISHOR JAWADE	Vivekanand Education Society's Polytechnic College Chembur, Mumbai 400071	TECHNOVATION 2024	STATE LEVEL TECHNICAL PAPER PRESENTATION 02-03-2024	certificate of appreciation
25	CHIRAG GUPTA	VIDYALANKAR POLYTECHNIC	V-TECHNOVATION	3D-PRINTER---STATE LEVEL PROJECT COMPETITION 2	certificate of participation
26	CHIRAG GUPTA	SVKM's Shri Bhagubhai Mafatlal Polytechnic	TECH FAIR '24	STATE LEVEL TECHNICAL PAPER PRESENTATION ON 6-3-2024	certificate of participation
27	CHIRAG GUPTA	XAVIER INSTITUTE OF ENGINEERING		HUMSHAKALS COMPETITION 18-1-2024	certificate of appreciation
28	CHIRAG GUPTA	XAVIER INSTITUTE OF ENGINEERING		AFLA ST. HARDWARE JN COMPETITION 18-1-2024	certificate of appreciation
29	CHIRAG GUPTA	Maharashtra State Board of Technical Education (MSBTE) bandra , Kherwadi	state level technical paper presentation competition	31/01/2024 Academic year 2023-24	certificate of participation
30	CHIRAG GUPTA	DIPEX 2024	AUTONOMUS DISASTER RESPONSE DRONE	PROJECT THEME MOBILITY -7TH-10TH MATCH 23024	certificate of participation
31	OM TAMBOE	St Xaviers Technical Institute& IETE MUMBAI	OSCILLATION-2024	23-Feb-24	certificate of participation
32	ARYAN SAWANT	SVKM's Shri Bhagubhai Mafatlal Polytechnic	TECH FAIR '24	STATE LEVEL TECHNICAL PAPER PRESENTATION ON 6-3-2024	certificate of participation
33	HAYDEN ALVARES	SVKM's Shri Bhagubhai Mafatlal Polytechnic	TECH FAIR '24	STATE LEVEL TECHNICAL PAPER PRESENTATION ON 6-3-2024	certificate of participation

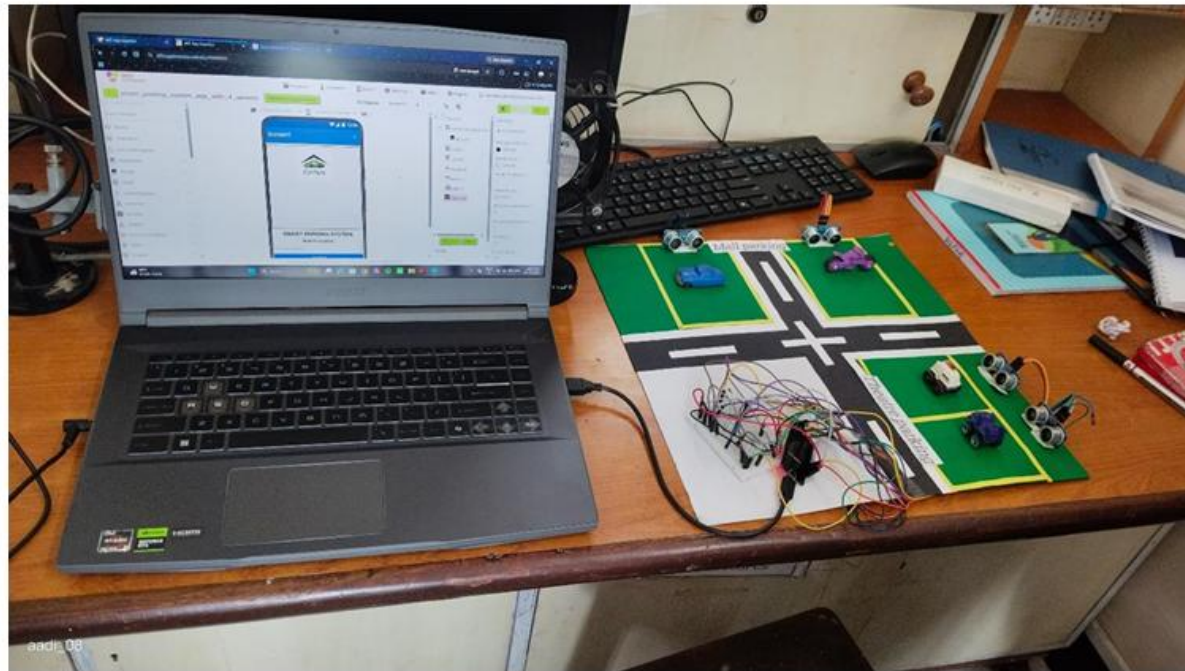




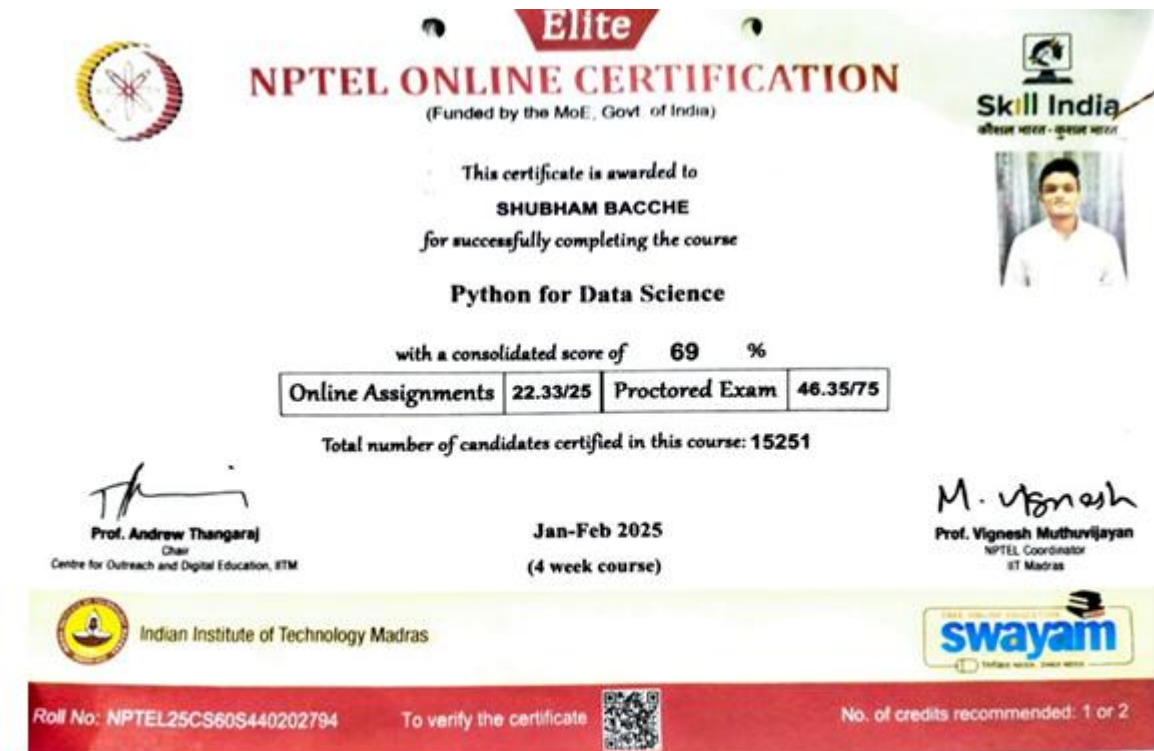
STUDENT LEVEL



**33 students papers
published / awards /
recognition received by
project at state / national level**



Student Centric Learning Initiative – Microprojects



Student Centric Learning Initiative – MOOCs, NPTEL

Hackathon Event – 23.1.24



XTECH OSCILLATION 2025 WINNERS are
felicitated in Valedictory function





CRITERIA 1

VISION, MISSION & PROGRAM EDUCATIONAL OBJECTIVES



VISION

Our Aspiration
for the Future



MISSION

Our Purpose
and Commitment



PEOs

Our Graduates.
Our Impact



Vision

To become a **centre of excellence** and to produce **high quality, self-motivated** creative and **ethical** diploma engineers and technologists, contributing effectively to **universal engineering** and **contemporary education**.



HIGH QUALITY EDUCATION

Rigorous learning for excellence



SELF-MOTIVATED

Driven to learn, innovate and excel



CREATIVITY & INNOVATION

Nurturing ideas that create impact



ETHICS & VALUES

Integrity, responsibility and respect



DIPLOMA ENGINEERS & TECHNOLOGISTS

Skilled, competent and industry ready



UNIVERSAL IMPACT

Engineering solutions for a better world



CONTEMPORARY EDUCATION

Future-ready learning for tomorrow



1

To prepare the students for a **brilliant career and entrepreneurship** along with the development of **knowledge, skills, attitude and teamwork** ideal for a professional through the designed programme.



2

The faculty of the department continually seeks to enhance their knowledge to competently lead and empower students through **continuous professional development**.



3

To impart **high quality engineering education and ethics** to the students and to provide the **best facilities, infrastructure and environment**, creating an ambience conducive for **excellence in technical education and research**.



1

PEO – 1

To produce diploma holders who have the ability to demonstrate technical competence in the fields of Electronics and Telecommunication engineering and develop solutions to the problems.



2

PEO – 2

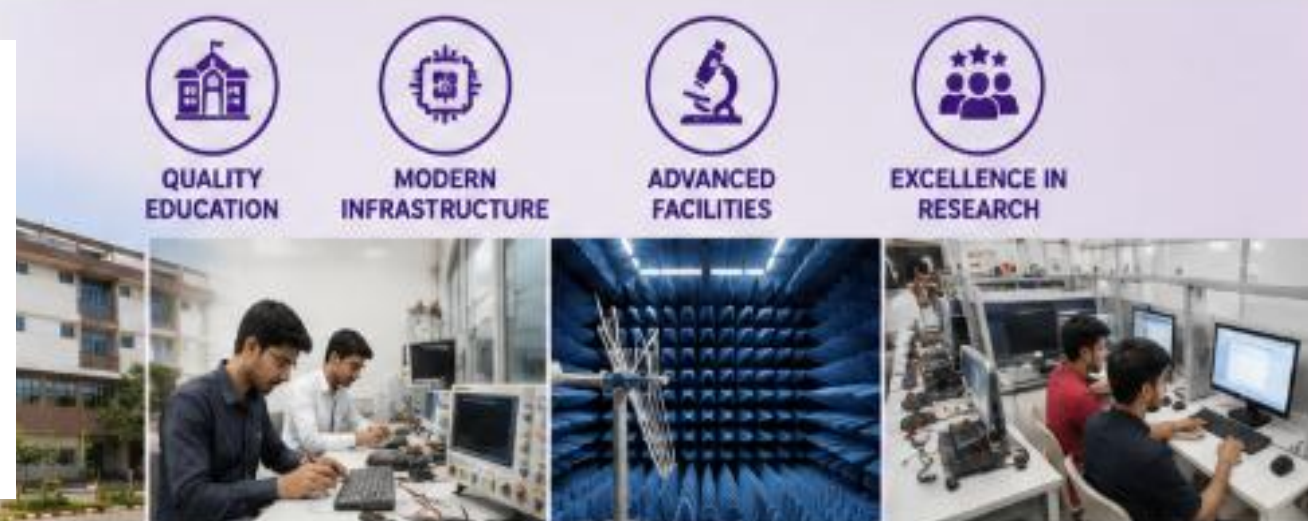
To produce diploma holders who would be able to take individual responsibility and to work as a part of a team towards the fulfilment of both individual and organizational goals.



3

PEO – 3

To prepare the students to engage in professional development through self-study, graduate and professional studies in engineering, management and research.



Vision, Mission and Program Educational Objectives

The Vision, Mission and PEOs are published and disseminated through



Institute website :

<https://xaviertech.ac.in>



Department website :

<https://xaviertech.ac.in/extc>

Other Dissemination Channels



Principal cabin



HoD cabin



TPO cabin



Examination cell



Departmental Notice Boards



Departmental Corridors



Class Rooms



Faculty Rooms



Laboratories



Course files



Prominent locations in the institution



Curriculum



Lab Manuals



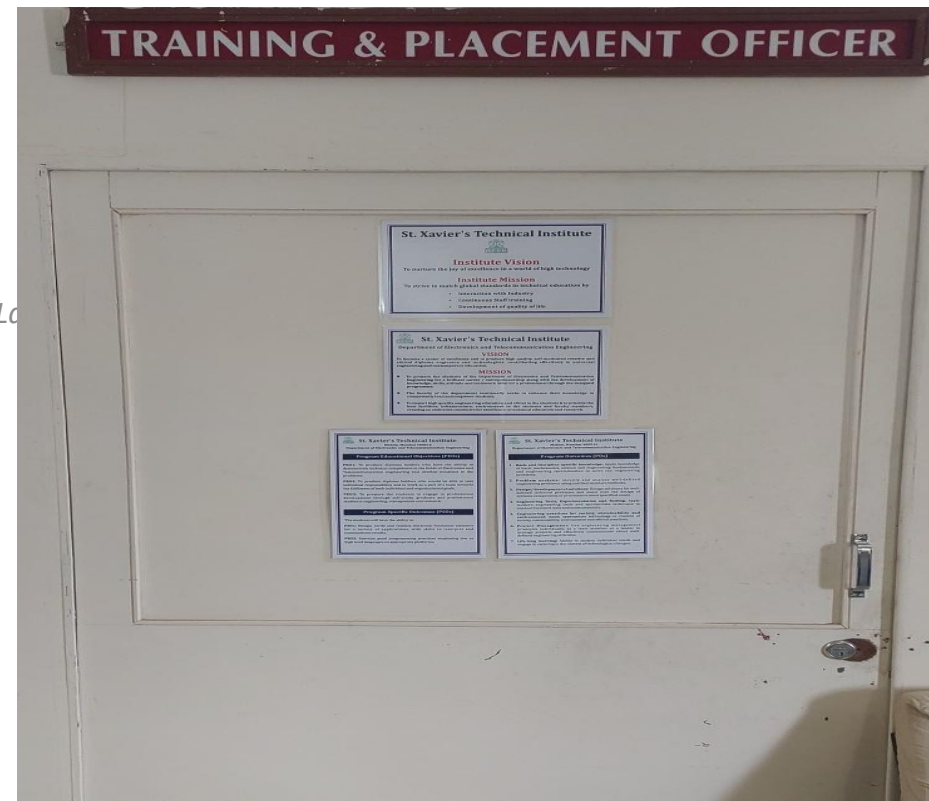
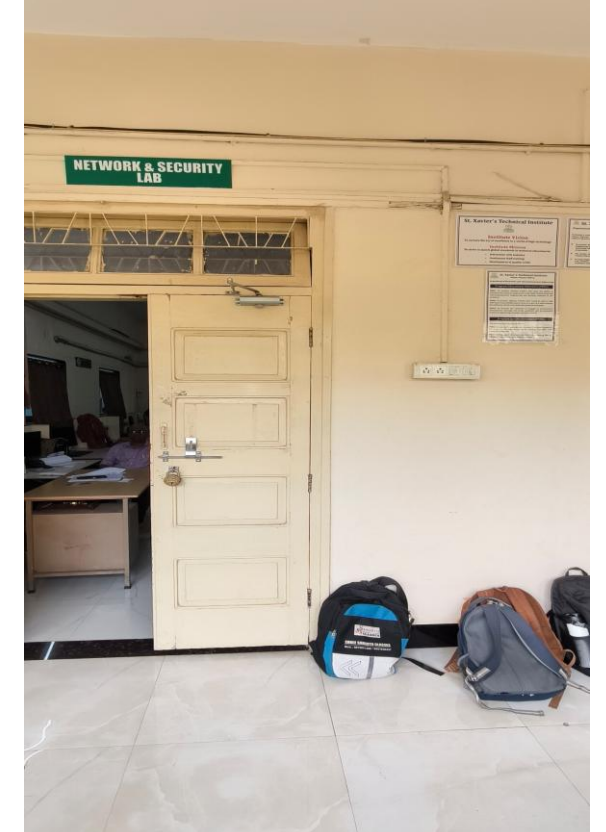
Parents meetings at the time of admission, counseling and in orientation programmes



Brochure



Institute Diary



TechFest 2026

NEXTECH - 2026
STATE LEVEL TECHNICAL FESTIVAL
Organized by
ST. XAVIER'S TECHNICAL INSTITUTE
(AUTONOMOUS GOVT. AIDED MINORITY INSTITUTE)
in association with
IETE & ISTE Mumbai
Mahim Causeway, Mahim, Mumbai - 400 016 • Email: office@xaviertech.ac.in • Website: www.xaviertech.ac.in

Invitation for entries from Engineering Diploma Students

• **Project Competition** : There will be two categories - **Category 1** - Electronics | Telecommunication | Electrical | AI-ML
Category 2 - IT | Computer | AI-ML

Prizes

Project (Each Category)
1st : Rs. 3,000
2nd : Rs. 2,000

Circuit Building
1st : Rs. 2,000
2nd : Rs. 1,000

Poster
1st : Rs. 2,000
2nd : Rs. 1,000

TPP (Each Category)
1st : Rs. 2,000
2nd : Rs. 1,000

CODING
1st : Rs. 2,000
2nd : Rs. 1,000

QUIZ
1st : Rs. 2,000
2nd : Rs. 1,000

Technical Paper Presentation
Date & Day : **Wednesday 25th March, 2026**
Participants : All 3rd year Diploma Students (In-house and External candidates)
There will be two categories - **Category-1**
Category 1 - Electronics | Telecom | Electrical | AI-ML
1) Applications of AI/ML in electronics
2) Electric Vehicles (EV)
3) 5G, 6G Mobile Technologies
4) Cognitive Radio
5) Smart Antennas
6) IoT in Electronics
7) Drone Technology
Category-2
Category 2 - IT | Computer | AI-ML
1) Cyber Security
2) Cloud Computing
3) Blockchain Technology
4) IoT & Large databases
5) Quantum Computing

Coding in 'C' and Python
Date & Day : **Wednesday 25th March, 2026**
Participants : Only 2nd year & 1st Year DETE, DCE IN-HOUSE Students
Individual participants are required to write and successfully execute the code in C/PYTHON for the given problem within stipulated time.

Quiz
Date & Day : **Wednesday 25th March, 2026**
Participants : Only 2nd year & 1st Year DETE, DCE IN-HOUSE Students. 2 participants per team

RULES AND REGULATIONS FOR TECHNICAL PAPER AND PROJECT:
Synopsis Formatting:
Paper size A-4, Heading Font Size 16pts, Sub Heading Font Size 14pts, Text Font Size 12pts, Line Spacing 1.5, Arial Font, Margins: Left & Right 1.25", Top and Bottom 1".

Contact Coordinators

For Project : prj@xaviertech.ac.in
Mr. Sanjay Borkar 9887228279
Mr. Rakesh Saroj 9887378297
Mr. Karthi Devendra 9138873451
Mr. Shankar Pansare 9887624717
For Circuit Building : cir@xaviertech.ac.in
Mr. Vinay Nandekar 9869886889

Technical Paper Presentation:
tp@xaviertech.ac.in
Dr. Mahesh Munde 8850036455
Ms. Sakshi More 8237747035
Mrs. Darshana Jadhav 9819757886

Important Dates
Last Date : Project / Paper Synopsis (Soft Copy) | Registration for Circuit Building (All submissions with registration)

TechFest 2026

INSTITUTE

VISION
To nurture the joy of excellence in a world of high technology.

MISSION
To strive to match global standards in technical education by

- Interaction with industry
- Continuous Staff Training
- Development of Quality of life of Staff and Students

Department of Electronics and Telecommunication Engineering

VISION
To become a centre of excellence and to produce high quality, self-motivated creative and ethical diploma engineers and technologists, contributing effectively to universal engineering and contemporary education.

MISSION

- To prepare student of the Department of Electronics and Telecommunication Engineering for a brilliant career/entrepreneurship along with the development of knowledge, skills, attitude and teamwork ideal for a professional through the designed programme.
- The faculty of the Department continually seeks to enhance their knowledge to competently lead and empower students.
- To impart high quality engineering education and ethics to the students & to provide the best facilities, infrastructure, and environment to the students and faculty members, creating an ambience conducive for excellence in technical education and research.

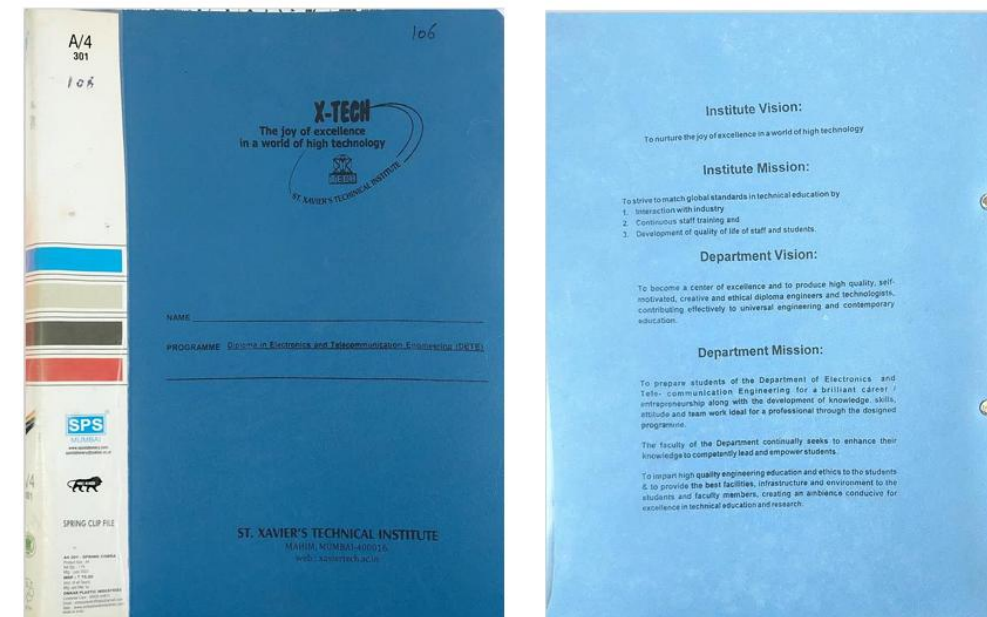
Department of Computer Engineering

VISION
To educate and equip computer engineering student with technical expertise, soft skills and social responsibility, enabling them to excel in their professions and contribute to the betterment of society.

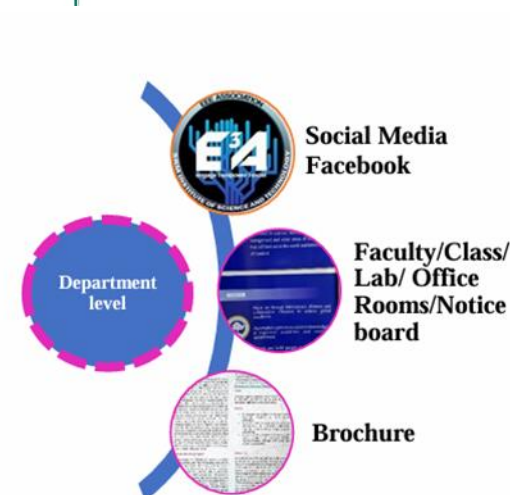
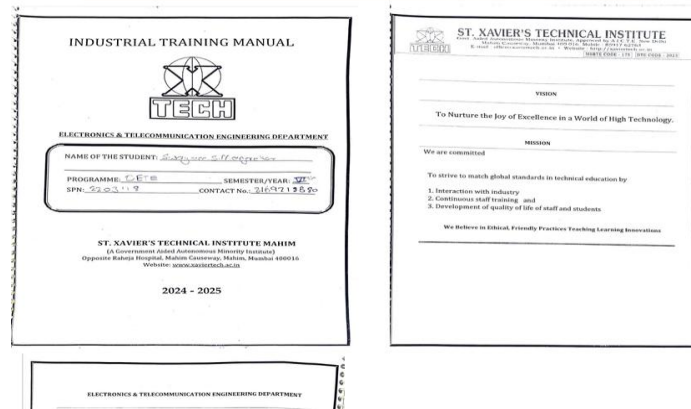
Diary 2026



Students File



Industrial Training Manual



The department's **Vision, Mission, and Program Educational Objectives (PEOs)** are prominently displayed across all floors, in classrooms, laboratories, and common areas to ensure continuous awareness and alignment among students and faculty.

Process of Defining Vision, Mission and Program Educational Objectives

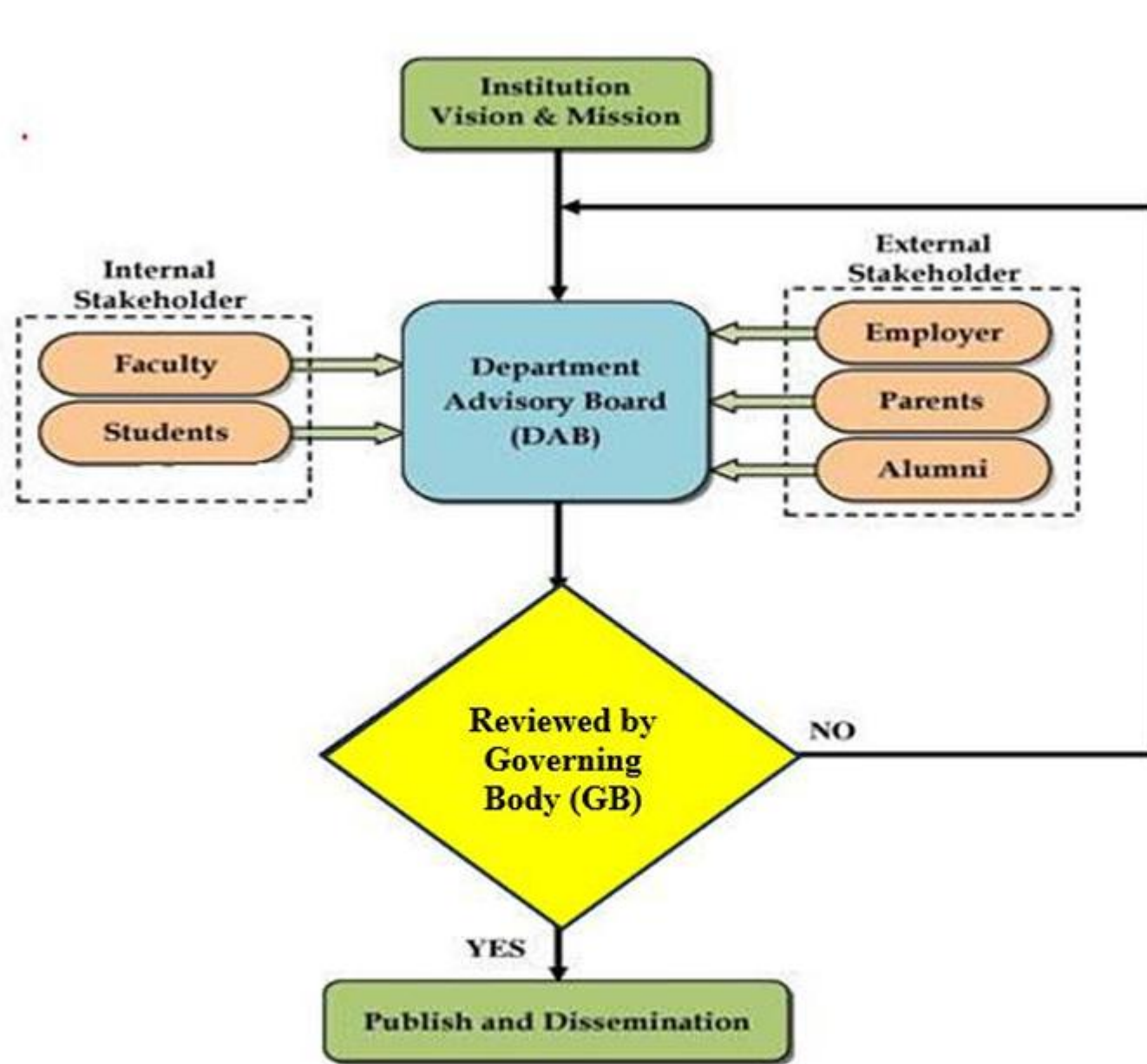


Fig: Process for defining Vision & Mission of the Department

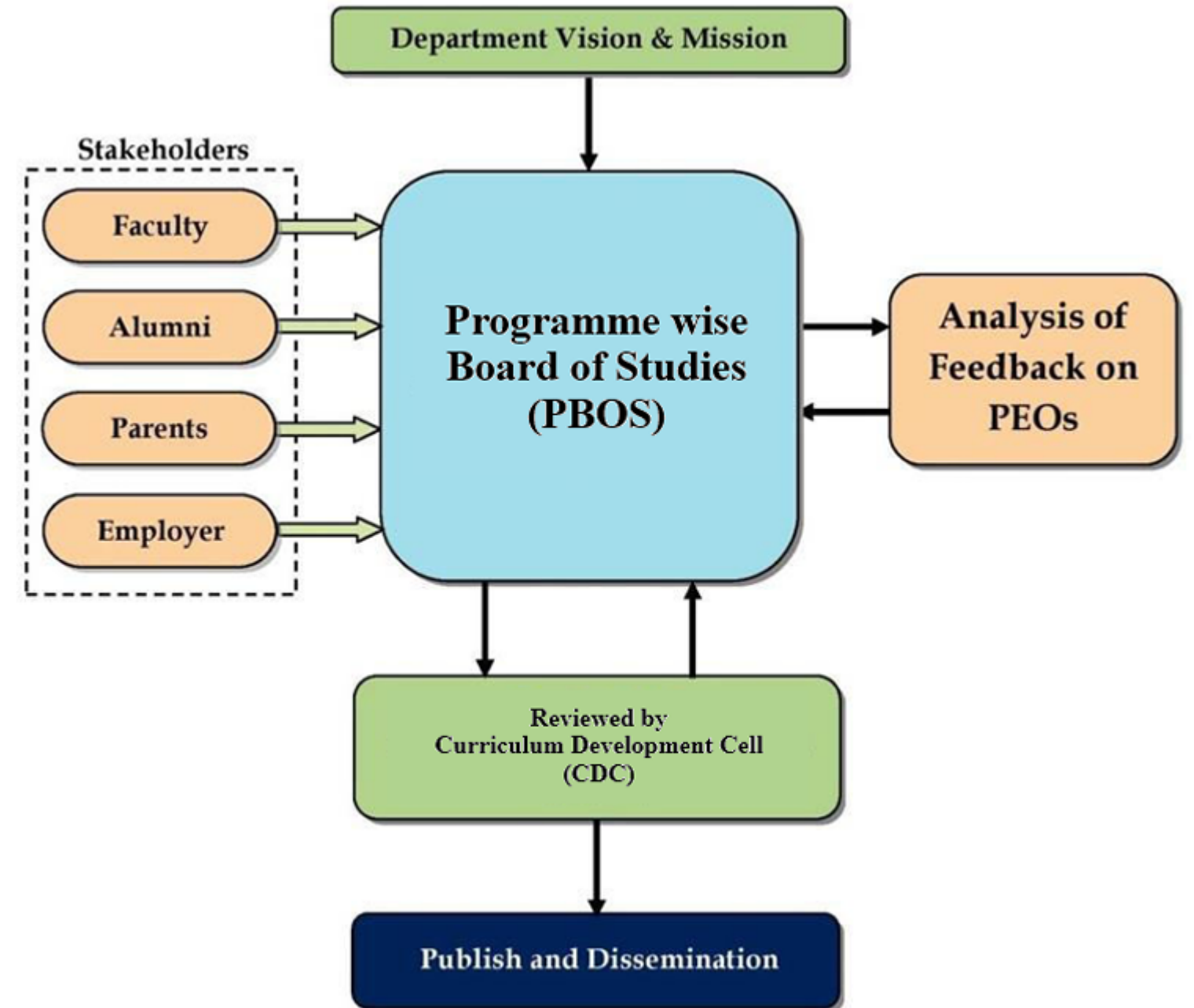


Fig: Process for defining the PEO of the Department

CRITERIA 2

PROGRAM CURRICULUM AND TEACHING – LEARNING PROCESSES



CURRICULUM



TEACHING



LEARNING



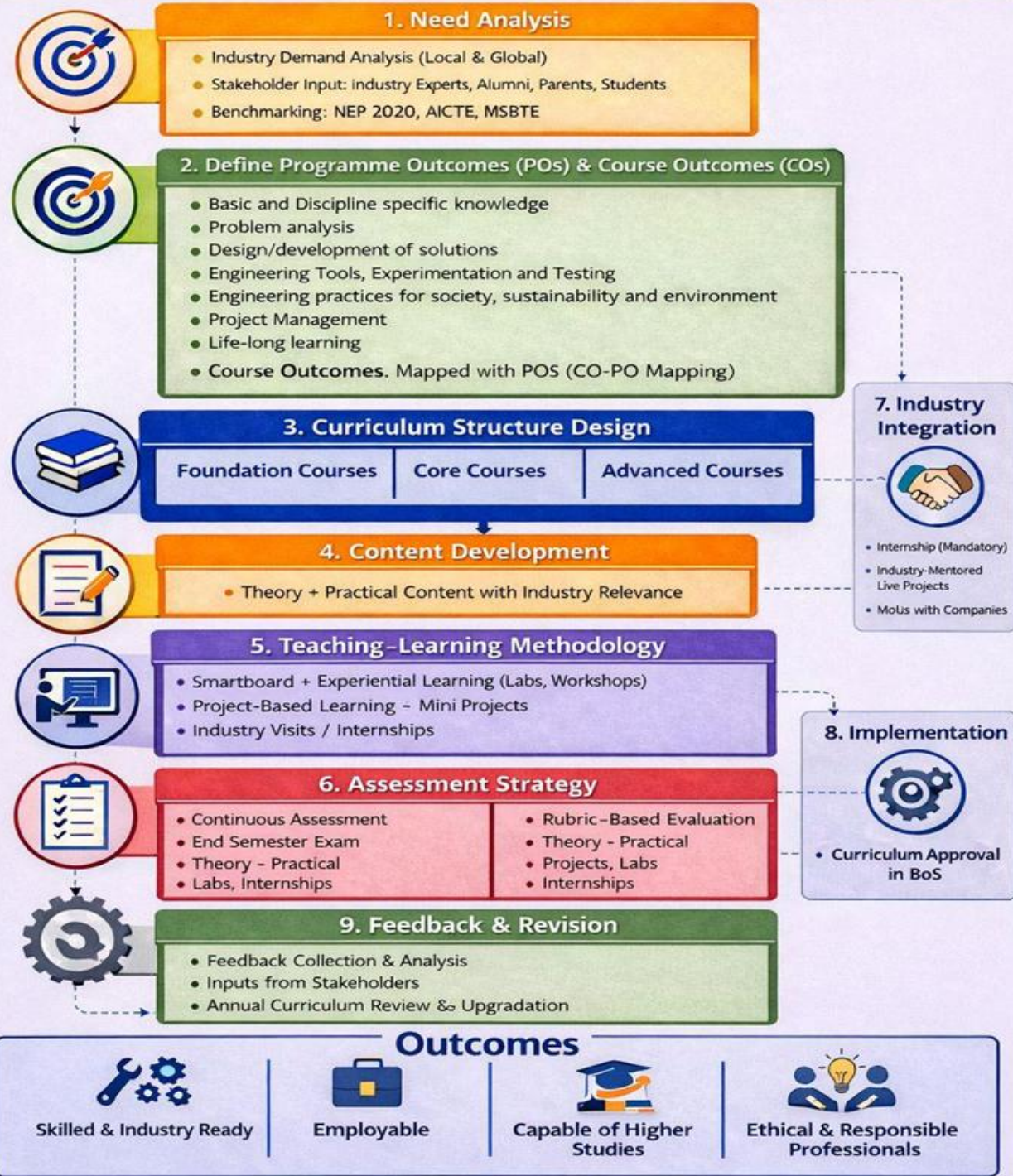
ASSESSMENT





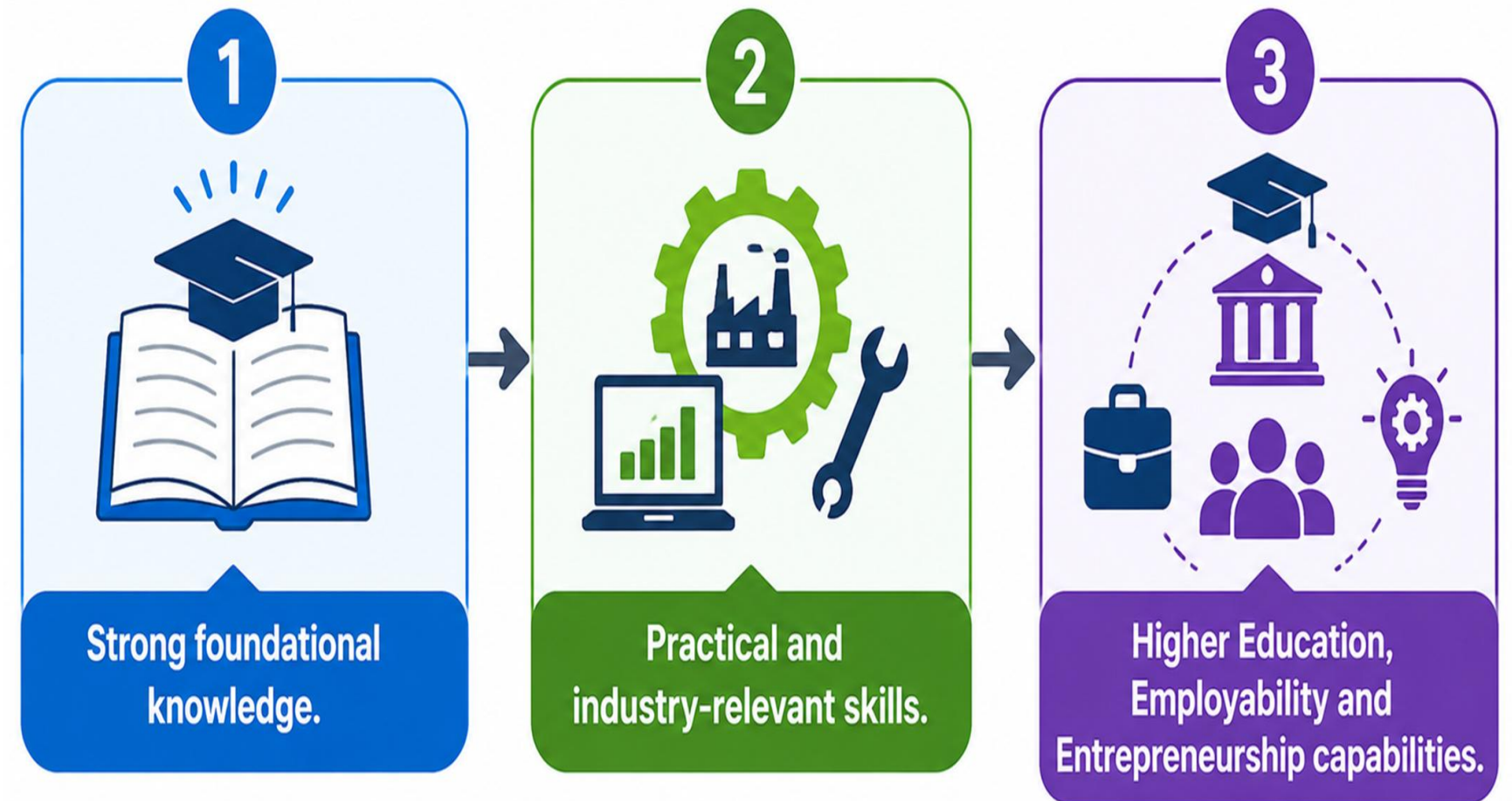
Curriculum Design Framework for Diploma Programme

at St. Xavier's Technical Institute



St. Xavier's Technical Institute

The aim of a curriculum design framework is to systematically develop and continuously improve an outcome-driven curriculum that ensures quality education, skill development, and alignment with industry and societal requirements.



Curriculum Feedback Gap Analysis Dashboard - for (AY 2022-23 to 2025-26)

Academic Year Filter	All	Overall Avg Score (out of 5)	Total Responses (Ratings)	Good+ Rating %	High Gap Ratings
Stakeholder Filter	All				
Study Year Level Filter	All				
		3.96	1230	94.1%	72

Evaluation Parameter vs Average Score / Gap Level			
Evaluation Parameter	Avg Score	Responses	Gap Level
Curriculum Relevance	4.07	123	Low Gap
Content Adequacy	3.98	123	Low Gap
Skill Development	3.97	123	Low Gap
Emerging Technologies	3.89	123	Low Gap
Practical & Industry Learning	3.97	123	Low Gap
Assessment & Learning Resources	3.92	123	Low Gap
Employability & Career Readiness	3.88	123	Low Gap
Regulatory Compliance	3.89	123	Low Gap
Teaching-Learning Effectiveness	4.06	123	Low Gap
Continuous Improvement	3.96	123	Low Gap

Top 5 Priority Actions (Lowest Scoring Parameters, Overall)				
Rank	Parameter	Avg Score	Gap Level	Suggested Action
1	Employability & Career	3.88	Low Gap	Add soft-skill, aptitude and placement modules
2	Emerging Technologies	3.89	Low Gap	Update content on IoT, AI/ML, Cybersecurity
3	Regulatory Compliance	3.89	Low Gap	Tighten CO-PO mapping and compliance
4	Assessment & Learning	3.92	Low Gap	Adopt application-based learning
5	Continuous Improvement	3.96	Low Gap	Use periodic stakeholder feedback and

Curriculum Feedback Gap Analysis Dashboard - For (AY 2022-23 to 2025-26)

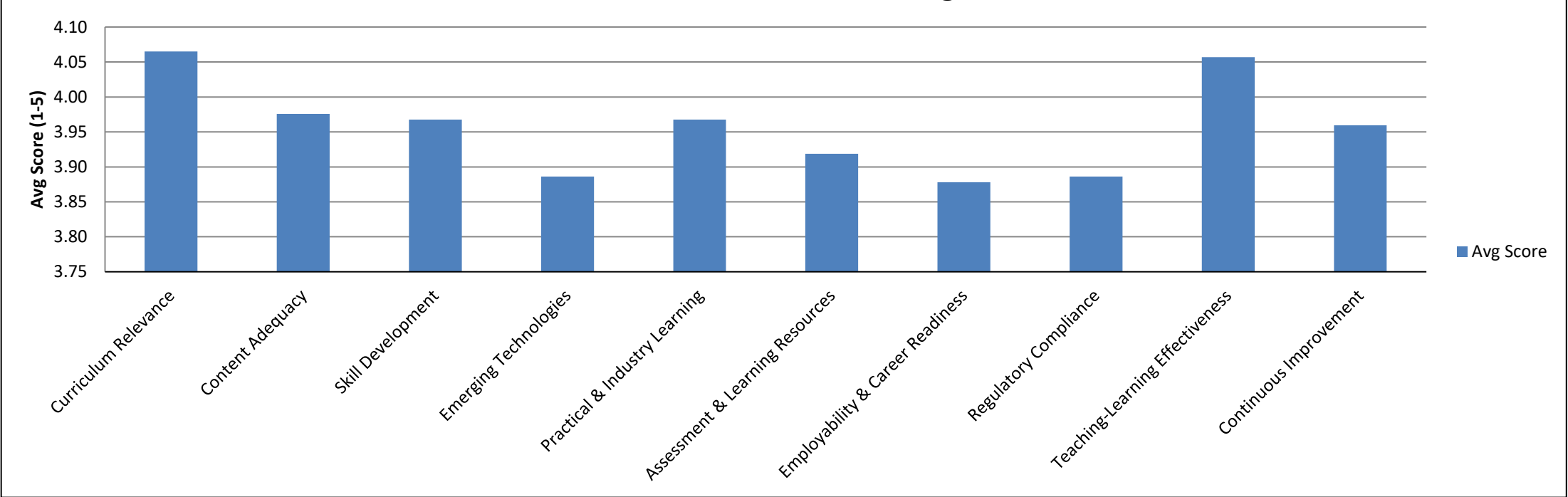
Stakeholder Comparison	
Stakeholder	Avg Score
Student	3.89
Faculty	4.52
Alumni	3.97
Industry Expert	3.70

Academic Year Trend	
Academic Year	Avg Score
22-23	4.48
23-24	4.27
24-25	4.16
25-26	3.84

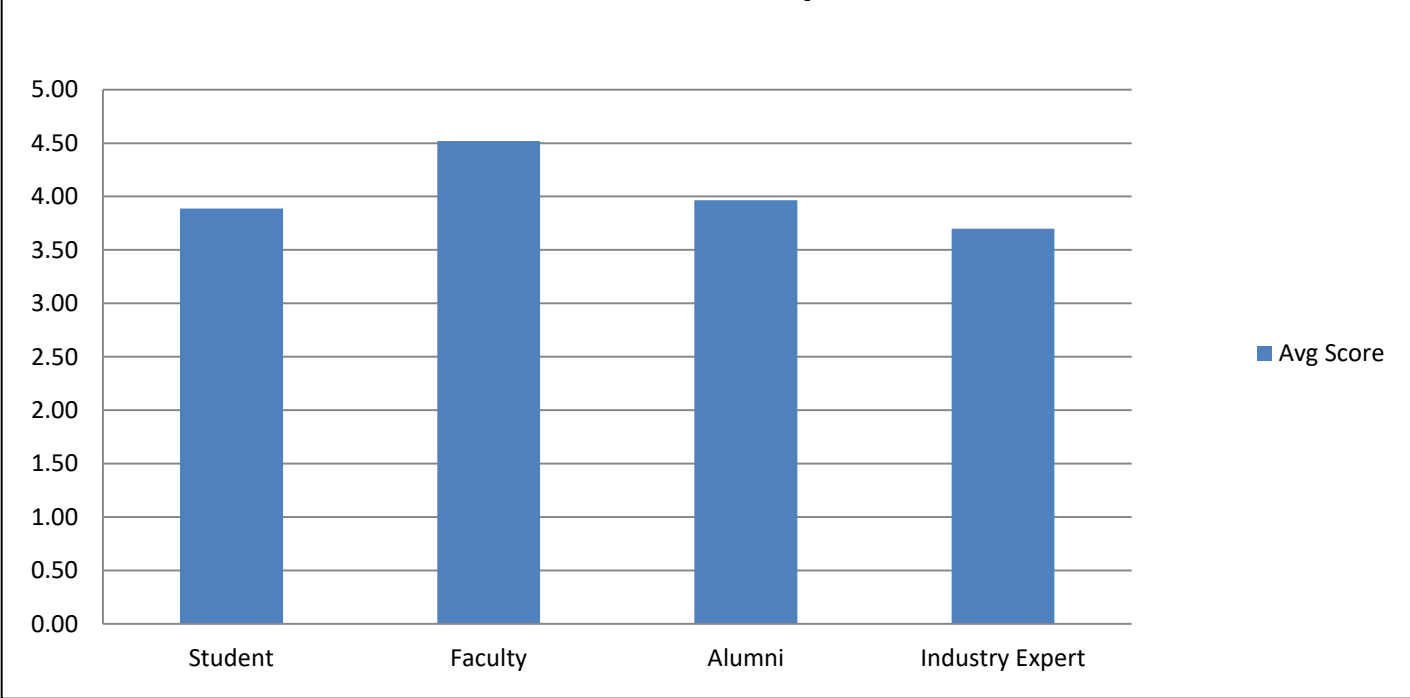
Gap Level Distribution	
Gap Level	Count
High Gap	72
Moderate Gap	316
Low Gap	413
No Gap (Strength)	429

Study Year Level Comparison	
Study Year Level	Avg Score
1st Year - Foundation	3.50
2nd Year - Core Subject	3.92
3rd Year - Application Based	4.28

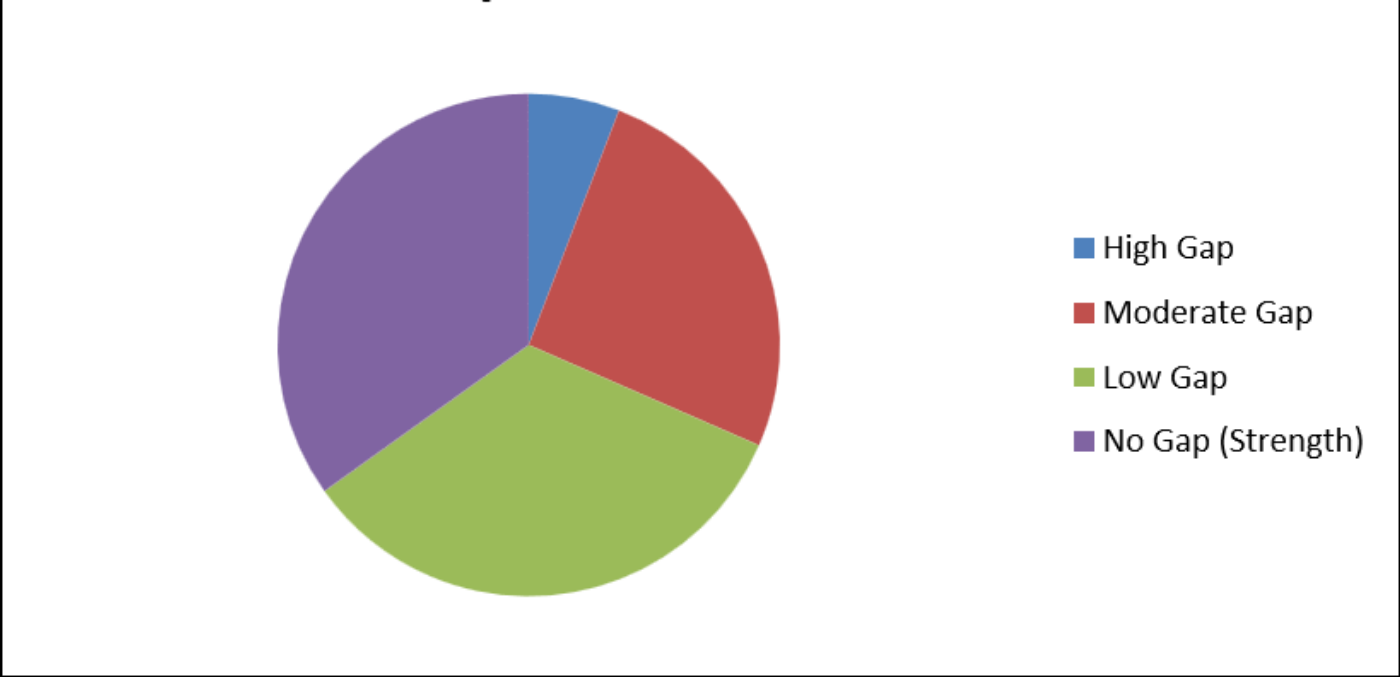
Evaluation Parameter vs Average Score



Stakeholder Comparison



Gap Level Distribution



DETE Programme Teaching Learning Process

Academic Calendar, Teaching Plan, Curriculum Coverage,
Classroom Teaching, Conducting of Experiments, Course
Outcomes

- *This chapter covers the teaching-learning process, academic calendar,*
- *and lecture planning*





ST. XAVIER'S TECHNICAL INSTITUTE, MAHIM
Government Aided Autonomous Minority Institute, Approved by A.I.C.T.E.
Mahim Causeway, Mumbai. Pin – 400 016
Phone: 8591762763
E-mail: office@xaviertech.ac.in

Academic Calendar 2026 - 2027(ODD TERM)
TERM DURATION:-29-06-2026 to 23-10-2026

Sr.No	Academic Activity		Schedule
1.	Start of Academic Term (Commencement of Classes)	II and III Year	29-06-2026
		I Year	17/07/2026
2.	Parent meeting -I		Third week of August 2026
3.	Mid Semester Student's feedback		21-08-2025
4.	Provisional Defaulter's list		End of every month
5.	Ganapati Vacation		14-09-2026 to 18-09-2026
6.	Parent's meeting-II		Last week of September 2026
7.	Periodical Test-I for 2nd and 3rd year		19 th , 20 th and 21 st August 2026
	Periodical Test-I for 1st and Direct 2nd year		In the September 2026
8.	Examination form filling (* normal fees only for backlog students) without late fees		01-09-2026 to 11-09-2026
9.	Examination form filling (* normal fees only for backlog students) + Rs. 200/- late fees per semester		24-09-2026 to 25-09-2026
10.	Examination form filling (* normal fees only for backlog students) + Rs. 1500/- late fees per semester		29-09-2026 to 30-09-2026
11.	Periodical Test-II for 2nd and 3rd year		14 th , 15 th and 16 th October 2026
	Periodical Test-II for 1st and Direct 2nd year		26 th , 27 th and 28 th October 2026
12.	End Semester Student's feedback		13-10-2026
13.	IMC Meeting		15-10-2026
14.	Final Defaulter's list – Second and Third year		22-10-2026
	Final Defaulter's list – First and Direct Second year		29-10-2026

14.	Final Defaulter's list – Second and Third year	22-10-2026
	Final Defaulter's list – First and Direct Second year	29-10-2026
15.	End of Academic Term – Second and Third year	23-10-2026
	End of Academic Term – First and Direct Second year	30-10-2026
16.	Diwali Vacation	05-11-2026 to 14-11-2026
17.	Practical Examination - 3rd year	26-10-2026 to 30-10-2026
18.	Practical Examination - 1st and 2nd Year	07-12-2026 to 11-12-2026
19.	Theory Examination	17-11-2026 to 04-12-2026
20.	Commencement of Industrial Training (SEM VI)	03-12-2026
21.	Commencement of Even Semester	14-12-2026

Page 1 | 2



ST. XAVIER'S TECHNICAL INSTITUTE, MAHIM
Government Aided Autonomous Minority Institute, Approved by A.I.C.T.E.
Mahim Causeway, Mumbai. Pin – 400 016
Phone: 8591762763
E-mail: office@xaviertech.ac.in

1. Examination fees of *Rs. 700/- to be paid by Backlog students only. Late fees if any imposed are to be paid by both Backlog and Regular students.
2. Refer to the Term End Examination Time Table for details when declared / displayed.
3. The academic schedule displayed is tentative and not final. The First year PT Schedule will be intimated after DTE CAP.
4. In unavoidable circumstances, any necessary amendment in the schedule of any activity will be notified through a separate circular on the institute's website.
5. Every month end the defaulter's list will be displayed.

Academic Calender 2026-2027



Details

Conduction of faculty awareness programs are conducted to ensure **effective understanding and implementation** of the curriculum.



Sub-Criteria

Faculty induction / awareness programs for curriculum implementation

Number of programs conducted in last 3 Years: **3 or more**



Key Highlight

Faculty awareness programs ensure effective curriculum implementation through regular induction sessions for new and existing faculty members.



Sub-Criteria	Guideline	Details
a) Adherence to Academic Calendar	Fully adherence	The teaching-learning process is planned with strict adherence to the academic calendar to ensure timely completion of the curriculum.
b) Teaching Plan Prepared & Followed	80% - 99%	Teaching plans are prepared and consistently followed by all faculty to ensure structured delivery and effective coverage of the curriculum.
c) Planning of Instructional Methods	80% - 99%	Various instructional and delivery methods are planned and implemented to enhance learning effectiveness, engagement, and competency development.

Key Insight: Structured planning with calendar adherence, teaching plans, and diverse instructional methods ensures effective curriculum delivery.



a) As Per Planning

Coverage ensured as per planned schedule, aligned with teaching plans and academic calendar.



b) Review Meetings

Review meetings conducted each semester to monitor curriculum delivery, assess progress, and address gaps.



c) Remedial Action

Proper Record Maintained
Remedial actions implemented promptly to address learning gaps and ensure students achieve course outcomes.

Process Flow: Curriculum planning (90-99% coverage) → Semester review meetings → Remedial actions for learning gaps → Achievement of course outcomes



Sub-Criteria	Guideline	Details
a) Quality of Classroom Teaching	Excellent	Teaching quality is excellent, demonstrating effective delivery, clarity, and active student engagement as observed in classroom.
b) Educational Learning Materials	More than 50%	Faculties effectively use self-developed PowerPoint, flash, and video presentations as teaching aids, enhancing instruction quality.
c) Innovative Pedagogy	Yes	Innovative pedagogy initiatives such as flipped classrooms are implemented to promote active learning and deeper conceptual understanding.
d) Use of AI Tools	60% - 79%	AI tools effectively used in teaching-learning to enhance personalized learning, interactive content delivery, and data-driven assessment.
e) Quality of Tests & Assignments	Excellent	Quality of progressive tests, micro-projects, and assignments is excellent with proper conduction, clear CO alignment, and effective assessment.



Guest Lecture in Communication Lab



Student repairing kit in Control Systems Lab



Students doing Project work in CC2 Lab



Students utilising Communication Lab for making project



a) Quality of Laboratory Experiments

Excellent quality ensuring hands-on learning, proper alignment with course outcomes, and effective skill development.



b) Working Equipment & Instruments

Excellent availability ranging between 86%-100%, ensuring smooth and effective laboratory sessions.



c) New Facilities for Learning

New facilities created in the laboratory to enhance the learning experience, providing students with improved resources and practical exposure.



d) Development of Lab Manuals

Laboratory manual fully developed, providing initial guidance for experiments while further enhancements are planned.



Guest Lecture in Communication Lab



Student repairing kit in Control Systems Lab



Students doing Project work in CC2 Lab



Students utilising Communication Lab for making project

Selection, Monitoring, Evaluation & Report Quality



Selection

Rigorous selection process for student projects



Monitoring

Effective monitoring throughout project duration



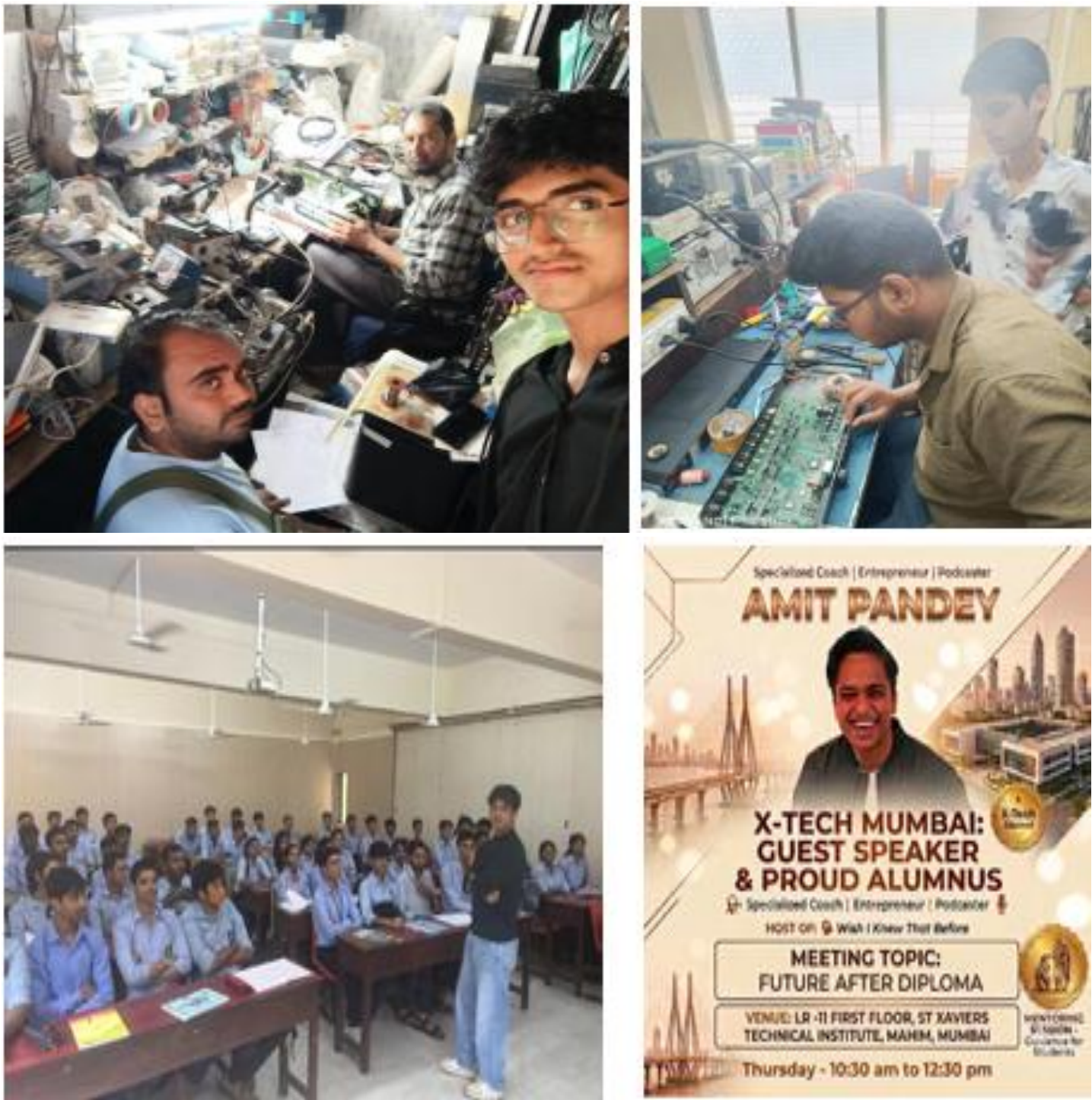
Evaluation

Strong alignment with POs and PSOs



Report Quality

Well-prepared, comprehensive project reports



Sub-Criteria	Guideline	Details
a) Industrial Visits/Tours	2-3 per Year	One visit per semester arranged to Doordarshan, automation expo, and other relevant industries for practical exposure.
b) Industry Expert Lectures	2-3 per Year	One industry expert lecture per semester is arranged to provide students with insights from industry professionals.
c) In-plant Training	Yes - All Students	Mandatory for 6th semester students and implemented in curriculum. All students undergo in-plant training.
d) Post Training Assessment	External Evaluation	Evaluation for 400 marks with 200 for termwork and 200 for final viva. Assessment by both external and internal examiners.

Industry Partners: Doordarshan, Automation Expo, and other relevant industries for comprehensive industry exposure.



a) Support for Weak Students

Remedial classes are conducted as a methodology to support weak students, helping them catch up with the curriculum and improve their academic performance.



b) Encouragement for Bright Students

Bright students are encouraged to participate in project competitions, TPP (Technical Paper Presentation), hackathons, and other technical events.

Dual Approach: Remedial support for weak students + Competitive platforms for bright students = Holistic student development



Students Feedback of Teaching Learning Process & Action



Details

Students' feedback on the teaching-learning process is regularly collected, analyzed, and acted upon to improve instructional methods, course delivery, and overall learning outcomes.

Collect Feedback



Analyze Data



Take Action



Improve Outcomes



Attendance Monitoring & Detention Norms Followed

Details

Students' attendance is regularly monitored, and detention norms are strictly followed to ensure consistent participation and academic discipline.



Regular Monitoring of student attendance



Strict Detention norms enforced



Academic Discipline maintained

CRITERIA 3

PROGRAM OUTCOMES & COURSE OUTCOMES



OUTCOMES

What Students
Should Achieve



COURSE OUTCOMES

What Students
Will Learn



ACHIEVEMENT

Measurable
Impact



EXCELLENCE

Continuous
Improvement



Course Name : Mathematics - I

Course Year : 2025-26

Course Outcome	Statement
CO 101.1	Apply the concepts of Logarithm and Partial Fractions to solve Engineerir related problems.
CO 101.2	Apply the concepts of Determinants to solve Engineering related problems.
CO 101.3	Apply the concepts of Matrices to solve Engineering related problems.
CO 101.4	Apply concept of straight lines for solving problems in geometrical applications.
CO 101.5	Utilize basic concepts of Trigonometry to solve elementary Engineering problems.
CO 101.6	Calculate measures of dispersion using statistical data.

COURSE OUTCOME (CO) PREPARATION AND CO-PO MAPPING PROCESS – DETAILED		
Step No.	Process Stage	Activity
1	Course Allotted to Course Expert	
2	Define Course Outcomes (COs)	
3	Understand Program Outcomes (POs)	
4	Map COs to POs	
5	Prepare Assessment Strategy	
6	Review and Validate CO-PO Mapping	
7	Forward for Review (Next Stage – Stakeholder / BOS)	

CO-PO CORRELATION SCALE		
Level	Scale	Description
High	3	Strong contribution of CO to the PO
Medium	2	Moderate contribution of CO to the PO
Low	1	Slight contribution of CO to the PO
No Correlation	0	No contribution of CO to the PO

SEM - I	Mathematics -I								
	1 st Course in First Semester								
CO 101	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2
CO 101.1	3	1	-	1	-	1	1	1	0
CO 101.2	3	2	1	1	-	1	1	1	0
CO 101.3	3	2	1	1	-	1	1	1	0
CO 101.4	3	2	1	2	-	1	1	1	0
CO 101.5	3	2	1	1	-	1	1	1	0
CO 101.6	3	2	2	2	1	1	1	1	0
CO TOTAL	18	11	06	08	01	06	06	6	0
CORRELATION LEVEL	3	2	1	1	0	1	1	2	0

Sem I

Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO101	3	2	1	1	0	1	1
CO102	3	2	2	2	1	1	1
CO103	3	1	1	2	1	1	1
CO104	3	1	2	1	0	1	0
CO105	0	0	0	3	3	3	3
CO106	0	3	0	0	2	3	3
CO107	0	0	0	3	3	3	3
CO108	0	1	-	-	2	1	1
CO109	0	0	0	3	3	3	3

Sem I

Code	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2
CO101	3	2	1	1	0	1	1	1	0
CO102	3	2	2	2	1	1	1	2	0
CO103	3	1	1	2	1	1	1	2	0
CO104	3	1	2	1	0	1	0	0	2
CO105	0	0	0	3	3	3	3	0	0
CO106	0	3	0	0	2	3	3	0	0
CO107	0	0	0	3	3	3	3	0	0
CO108	0	1	-	-	2	1	1	0	0
CO109	0	0	0	3	3	3	3	0	0



Sub-Criteria	Guideline	Details
a) Attainment of Course Outcomes	CO-wise / Course-wise Done	Attainment of course outcomes has been evaluated and documented CO-wise and course-wise, ensuring comprehensive tracking of student learning.
b) Attainment of POs & PSOs	Competencies / PI Done	Programme Specific Outcomes (PSOs) and Programme Outcomes (POs) have been assessed and recorded systematically through competency mapping.
c) Remedial Action Beyond Curriculum	Proper Record Maintained	Conduct additional sessions, workshops, mini-projects, and industry-oriented activities beyond the curriculum to enhance the attainment of POs and PSOs.



Attainment Of Course Outcomes

- In Course Outcomes Assessment Processes, Assessment tools are categorized into two methods to evaluate the Course outcomes. They are

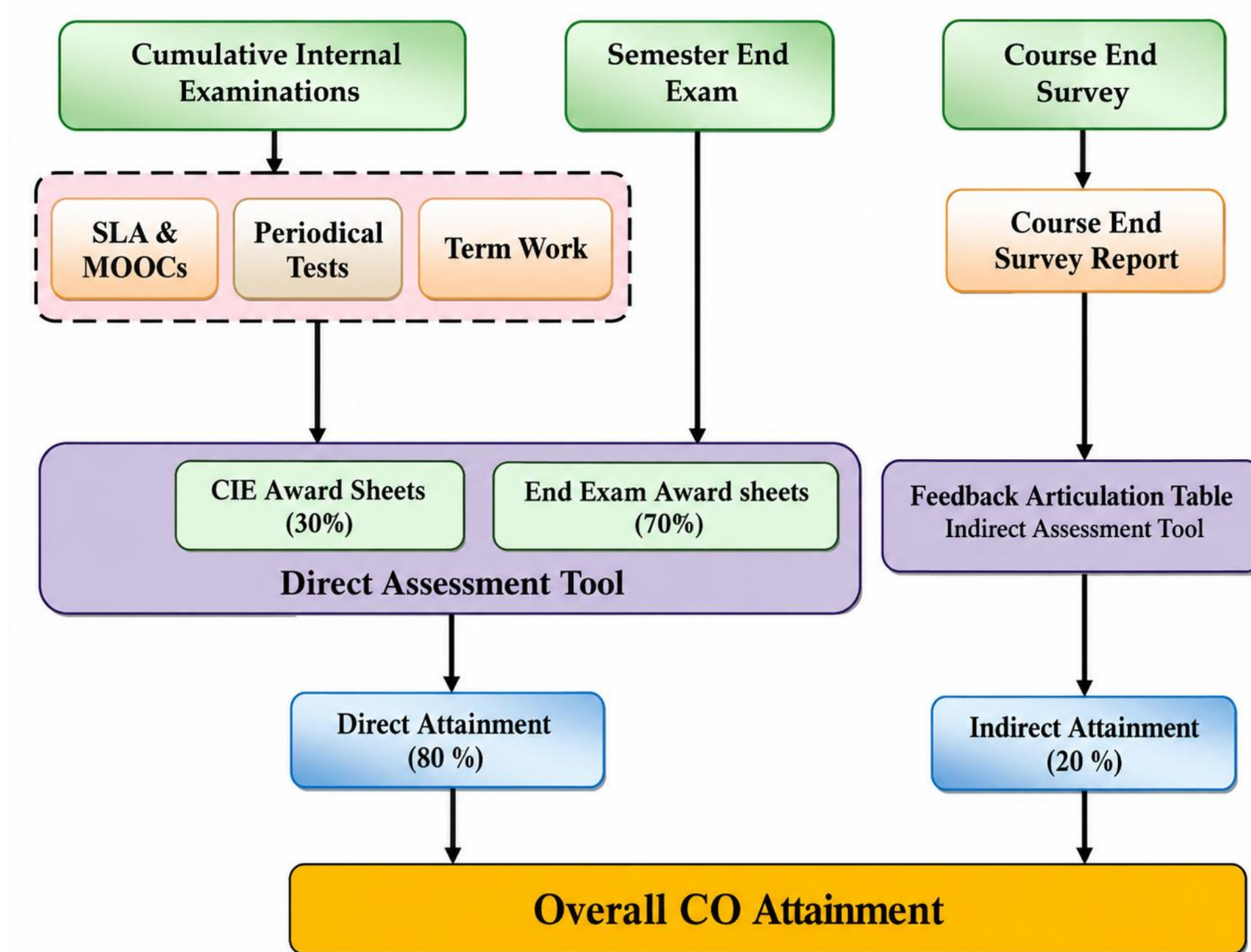
☐ Direct Method

☐ Indirect Method

- Direct Method is used to **display the student's performance** in the continuous internal assessment tests, semester examinations, seminars, Projects and assignments.
- Indirect Method is implemented by **conducting survey from the students** to reflect on their learning which includes course exit feedback.

Record The Attainment Of Course Outcome Of All Courses With Respect To Set Attainment Levels

- Program shall have set Course Outcome attainment levels for all courses.
- Measuring Course Outcomes attained through Theory and Practical examinations, Periodical Test, term work etc.
- **Attainment Level 1: 50%** students scoring more than above average marks in the Final examination is considered to be attainment of "**1**".
- **Attainment Level 2: 60%** students scoring more than above average marks in the Final examination is considered to be attainment of "**2**".
- **Attainment Level 3: 70%** students scoring more than above average marks in the Final examination is considered to be attainment of "**3**".



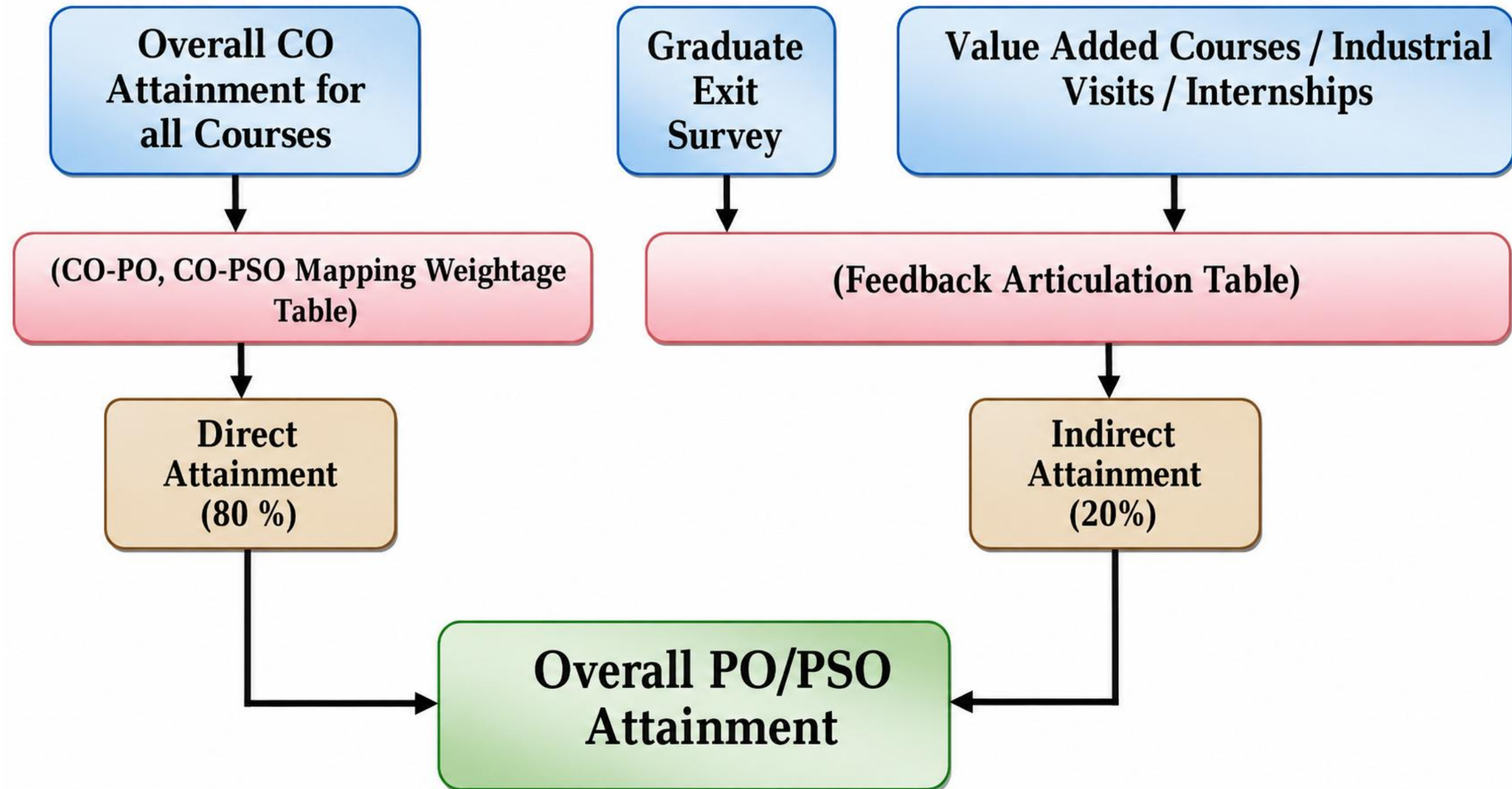
Attainment Of Program Outcomes And Program Specific Outcome

**Describe Assessment tools & processes used For Assessing The Attainment Of Each PO's & PSO's
As mentioned in Annexure-1**

The Assessment tools are broadly classified in to two types.

- ☐ **Direct Assessment tools**
- ☐ **Indirect Assessment tools**

Attainment Of Program Outcomes And Program Specific Outcome



Result Of Evaluation Of Each PO's And PSO's Attainments

CO ATTAINMENT WITH PO – MATHEMATICAL EQUATION

$$\text{CO Attainment With PO} = \frac{[(\text{Attainment of CO via Direct and Indirect}) \times (\text{Mapped CO with PO})]}{3}$$

In Symbols:

$$A_{\text{CO-PO}} = (A_{\text{CO}} \times M_{\text{CO-PO}}) / 3$$

Where,

A_{CO} = Attainment of CO via Direct and Indirect
 $M_{\text{CO-PO}}$ = Mapped CO with PO (CO-PO correlation level)
 $A_{\text{CO-PO}}$ = CO Attainment with PO

CO-PO Correlation Scale:

1 = Low Correlation
2 = Medium Correlation
3 = High Correlation

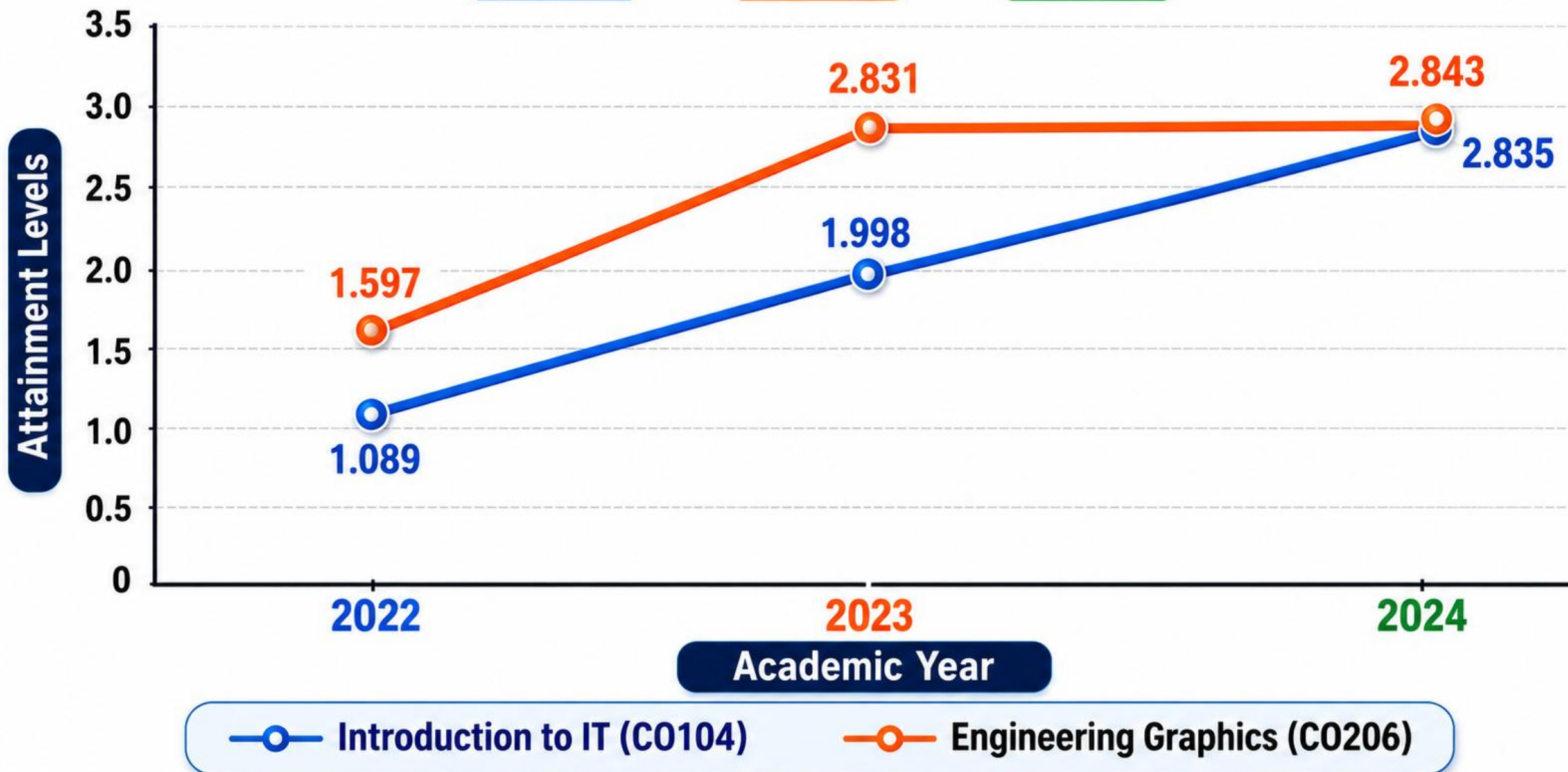
Course Outcome (CO) 80%	Course Exit Feedback	Course Outcome (CO) 20%	Attainment	Attainment
0.96	2.15625	0.43125	1.39125	1.39125
0.96	2.59375	0.51875	1.47875	1.47875

NBA COURSE CODE	P01	P02
CO101	3	
CO102		3

NBA COURSE CODE	P01	P02
CO101	1.39125	
CO102	1.47875	0

Attainment Comparison (Academic Year wise)

2022 vs **2023** vs **2024**



CRITERIA 4

STUDENT'S PERFORMANCE

Measuring student achievement, learning outcomes, and overall performance to ensure academic excellence and continuous improvement.



ACADEMIC ACHIEVEMENT

Strong academic results and subject proficiency.



LEARNING OUTCOMES

Attainment of program outcomes and knowledge application.



OVERALL PERFORMANCE

Holistic development through co-curricular and extra-curricular activities.



PROGRESSION & PLACEMENT

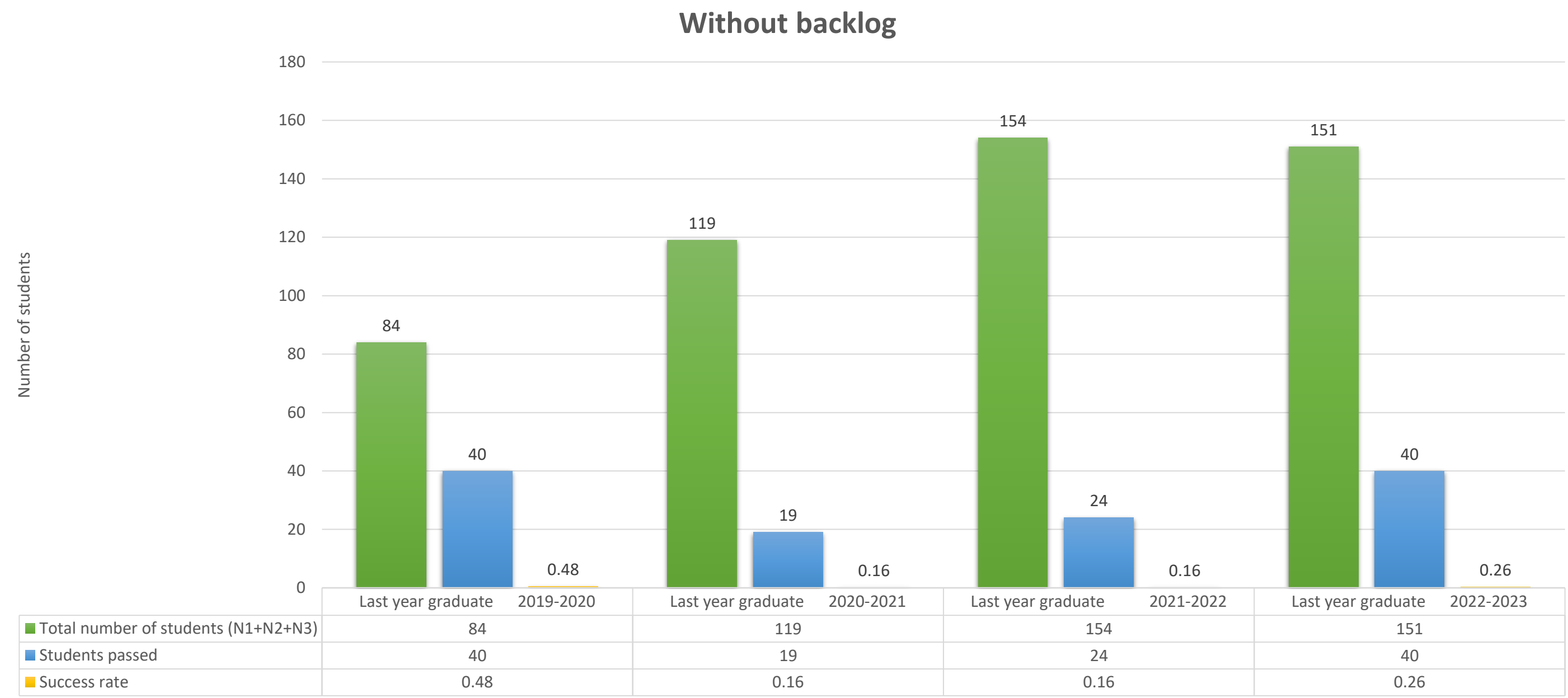
Higher studies, placements and career advancement.



Enrolment ratio

Academic year	CAY	CAYm1	CAYm2
	2024-2025	2023-2024	2022-2023
SPN series	24 series	23 series	22 series
Intake considered for calculation (N)	120	120	120
Total number of students admitted through the state level counseling (N1)	117	125	124
Number of students admitted through Institute level quota (N2)	N.A.	N.A.	N.A.
Number of students admitted through lateral entry (N3)	38	21	27
Total number of students admitted in the programme (N1+N2+N3)	155	146	151
Enrollment Ratio (N1+N2)/N	0.98	1.04	1.03
Average Enrolment Ratio CAY 2024-2025	1.02		
Average Enrolment Ratio in percentage CAY 2024-2025	100		

Success rate without backlog

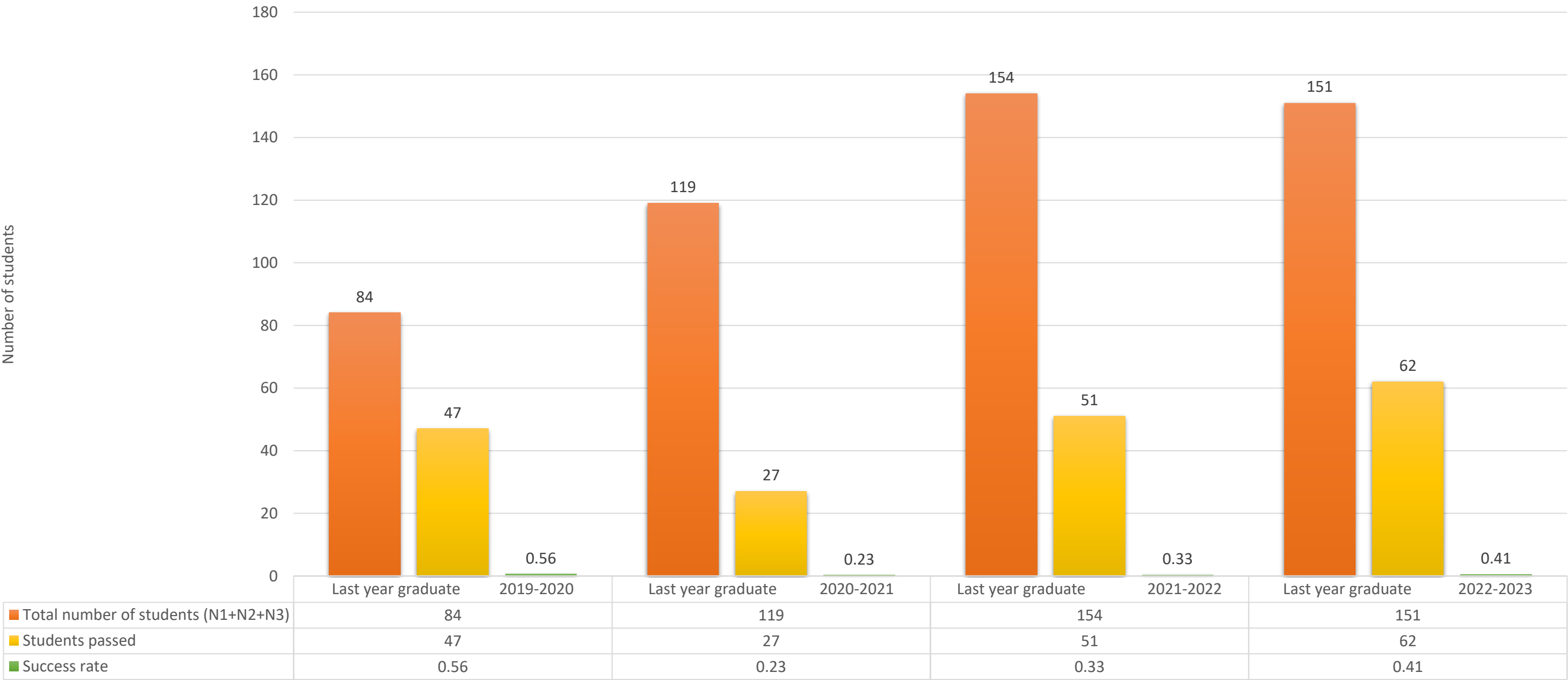


Success rate for CAY
2024-2025 = 10.56

Success rate for CAY
2025-2026 = 7.74

Success rate with backlog

With backlog



Success rate for CAY
2024-2025 = 7.45

Success rate for CAY
2025-2026 = 6.46

Academic Performance in First Year

Academic Performance	CAYm1	CAYm1	CAYm2	CAYm3
Academic Year	2024-2025	2023-2024	2022-2023	2021-2022
SPN Series	24 series	23 series	22 series	21 series
Mean CGPA or Mean Percentage of all successful students (X)	6.69	6.73	6.35	6.54
Total number of successful students (Y)	71	71	67	57
Total number of students appeared in the examination (Z)	117.00	125.00	124.00	94.00
API = $X*(Y/Z)$	4.06	3.82	3.43	3.97
Average API (CAY 2024-2025)			3.74	
Academic Performance level = $2.5*Average\ API$ (CAY 2024-2025)			9.35	
Average API (CAY 2025-2026)			3.77	
Academic Performance level = $2.5*Average\ API$ (CAY 2025-2026)			9.43	

Academic Performance in **Second Year**

Academic Performance	CAYm2	CAYm2	CAYm3	CAYm4
Academic Year	2023-2024	2022-2023	2021-2022	2020-2021
SPN Series	23 series	22 series	21 series	20 series
Mean CGPA or Mean Percentage of all successful students (X)	7.35	7.39	6.57	6.61
Total number of successful students (Y)	59	67	63	65
Total number of students appeared in the examination (Z)	92.00	94.00	117.00	111.00
API = $X \cdot (Y/Z)$	4.71	5.27	3.54	3.87
Average API (CAY 2024-2025)			4.23	
Academic Performance level = $2.0 \cdot$ Average API (CAY 2024-2025)			8.45	
Average API (CAY 2025-2026)			4.51	
Academic Performance level = $2.0 \cdot$ Average API (CAY 2025-2026)			9.01	

Academic Performance in Third Year

Academic Performance	Last year Graduate (LYG)	Last year Graduate (LYG)	Last year Graduate (LYG) minus 1 batch	Last year Graduate (LYG) minus 2 batch
Academic Year	2022-2023	2021-2022	2020-2021	2019-2020
SPN Series	Summer 2022 (22 series)	Summer 2024 (21 series)	Summer 2023 (20 series)	Summer 2022 (19 series)
Mean CGPA or Mean Percentage of all successful students (X)	8.4	7.63	7.46	7.53
Total number of successful students (Y)	62	51	27	47
Total number of students appeared in the examination (Z)	67.00	63.00	65.00	73.00
API = $X \cdot (Y/Z)$	7.77	6.18	3.10	4.85
Average API (CAY 2024-2025)			4.71	
Academic Performance level = $1.5 \cdot$ Average API (CAY 2024-2025)			7.06	
Average API (CAY 2025-2026)			5.68	
Academic Performance level = $1.5 \cdot$ Average API (CAY 2025-2026)			8.52	

CRITERIA 5

FACULTY INFORMATION AND CONTRIBUTION

Empowering education through dedicated faculty, expertise, and continuous contribution to academic excellence and student success.



QUALIFIED & EXPERIENCED

Highly qualified and experienced faculty driving academic excellence.



TEACHING EXCELLENCE

Innovative teaching methods for effective learning outcomes.



RESEARCH & INNOVATION

Active in research, publications and promoting innovation.



MENTORSHIP & GUIDANCE

Mentoring students for career growth and personal development.



Faculty : 14

Supporting Staff: 12



Department Highlights Faculties



List of Faculty Members

Sr. No.	Name of Faculty Member	Designation	Qualification & University	Date of Joining	Status	Experience (2025–26)
1	Dr. S. B. Ghungrad	Principal	Ph.D. (Electronics), Mumbai · MBA (HR), Anna · M.E. (BME), Mumbai · M.E. (Instr.), Marathwada · B.E. (Instr.), Marathwada	09/05/2007	Regular	19 Yrs
2	Dr. V. R. Rathod	Head of Department	Ph.D. (DIP & NDT), IIT Roorkee · M.Tech. (EXTC), Dr. B.A.T.U · B.E. (EXTC), Amravati	01/03/2000	Regular	26 Yrs
3	Mr. K H Kamath	Lecturer (Sel. Gr.)	M.E (Mumbai University)	03/12/1986	Regular	35 Yrs
4	Mr. S. N. Jirapure	Lecturer (Sel. Gr.)	B.E. (Electronics), Amravati	13/01/1992	Regular	34 Yrs
5	Mr. R. V. Gheware	Lecturer (Sel. Gr.)	M.E. (EXTC), Marathwada · B.E. (Electronics)	03/07/1995	Regular	31 Yrs
6	Dr. J. Natarajan	Lecturer (Sel. Gr.)	Ph.D. (Electronics), NIT Trichy · M.E. (EXTC), Mumbai · B.E. (ECE), Bharathidasan	01/07/1999	Regular	27 Yrs
7	Mrs. S. A. Datta	Lecturer (Sel. Gr.)	M.Sc. (Mathematics), IIT Kharagpur · B.Ed., Mumbai	01/07/1999	Regular	27 Yrs
8	Mr. A. C. Gurav	Lecturer (Sr. Scale)	M.E. (EXTC), Shivaji · B.E. (EXTC), Shivaji	03/02/2004	Regular	22 Yrs

List of Faculty Members

Sr. No.	Name of Faculty Member	Designation	Qualification & University	Date of Joining	Status	Experience (2025–26)
9	Mr. S. R. Borkar	Lecturer (Sr. Scale)	M.E. (EXTC), Mumbai · B.E. (Electronics), Marathwada	19/06/2006	Regular	20 Yrs
10	Dr. M. M. Munde	Lecturer (Sel. Gr.)	Ph.D. (EXTC), Dr. B.A.T.U Lonere · M.Tech. (EXTC), Dr. B.A.T.U · B.E. (EXTC), Dr. B.A.M.U Aurangabad	27/06/2006	Regular	20 Yrs
11	Mr. V. Nagalikar	Lecturer (Sr. Scale)	M.E. (EXTC), Mumbai · B.E. (EXTC), RTMNU	11/08/2009	Regular	17 Yrs
12	Mrs. S. A. Gaoshinde	Lecturer	B.E. (EXTC), RGPV Bhopal	01/10/2010	Regular	16 Yrs
13	Mr. R. R. Saroj	Lecturer	M.E. (EXTC), Mumbai · B.E. (EXTC), Mumbai	20/04/2015	Regular	11 Yrs
14	Mr. A. A. Patil	Lecturer	M.E. (EXTC), Mumbai · B.E. (EXTC), Mumbai	29/04/2015	Regular	11 Yrs



Student–Faculty Ratio (SFR)

S:F Ratio = N / F

N = No. of students = $3x$ (x = approved intake + 20% lateral-entry intake + separate division, if any)

F = No. of faculty = (a + b – c) for every assessment year

Year-wise Ratio Computation

Parameter	CAYm2 (22–23)	CAYm1 (23–24)	CAY (24–25)	CAY (25–26)
Regular Faculty (F)	14	14	14	13
Number of Students (N)	396	396	396	396
N / F Ratio	28.29	28.29	28.29	30.47
Average N/F				28.84

Sanctioned intake: 396 students • Approved Faculty–Student Ratio: 1 : 25



Faculty Qualification (FQ)

$FQ = 2.0 \times (10x + 7y) / F$

x = faculty with M.E./M.Tech. (or Ph.D./M.Phil. for Humanities & Science) • y = faculty with B.E./B.Tech. (or MA/M.Sc.)

F = faculty required to comply with 1:25 Faculty-Student Ratio = 16

Parameter	CAYm2 (22–23)	CAYm1 (23–24)	CAY (24–25)	CAY (25–26)
x (M.E. / M.Tech. / Ph.D.)	10	10	10	9
y (B.E. / B.Tech. / M.Sc.)	4	4	4	4
F (Required)	16	16	16	16
Faculty Qualification Score	16.00	16.00	16.00	14.75



Faculty Retention

Faculty Retention (%) = (Number of Faculty Retained / Number of Faculty in Previous Year) × 100

Parameter	CAYm2 (22–23)	CAYm1 (23–24)	CAY (24–25)	CAY (25–26)
Number of Faculty	14	14	14	13
Retention	14 / 14	14 / 14	14 / 14	13 / 14
Retention %	100%	100%	100%	92.85%
Average Retention	—	—	—	98.21%

CRITERIA 6

FACILITIES AND TECHNICAL SUPPORT

— TEACHING LABS AND — SPECIAL LABORATORIES



Providing state-of-the-art infrastructure, modern teaching labs, and specialized laboratories with technical support to enhance practical learning and innovation.



MODERN INFRASTRUCTURE

Well-equipped labs with advanced infrastructure.



TEACHING LABS

Well-structured teaching labs for effective learning.



SPECIAL LABORATORIES

Advanced specialized labs for practical and experimental learning.



TECHNICAL SUPPORT

Dedicated technical staff ensuring smooth operations and support.



INNOVATION & EXCELLENCE

Encouraging research, innovation, and hands-on learning.



Department /Infrastructure / Teaching Learning Process Overview



This presentation provides a comprehensive overview of the **Department of Electronics & Telecommunication** at St. Xavier's Technical Institute, covering department profile, infrastructure facilities, and teaching-learning processes for **NBA Expert Committee** evaluation.



About the Institution

St. Xavier's Technical Institute, established in 1937, is a heritage institution with 88+ years of excellence. The Institute has been awarded Academic Autonomy since 1994-95, recognized by the Government of Maharashtra. All programmes are approved by AICTE.

Department of Electronics & Telecommunication (DETE)

Department Overview

Programme details, student enrollment trends, faculty strength, vision and mission of the department



** This chapter covers the department profile, faculty qualifications, library resources, and institutional strengths*

Infrastructure & Laboratories

10 well-equipped laboratories across 4 floors with detailed experiment listings and course outcomes, Six Smart Classrooms

- This chapter presents a visual tour of all laboratory facilities
- floor by floor



Ground floor facilities (St. Xavier's Technical Institute, Mahim)



Canteen



Canteen



Purified drinking water facility, Toilet for Ladies and Gents .



Workshop

Ground Floor Laboratory Facilities



Sports Facilities for students



First Aid kit, Doctor Visiting/ Rest Room

Equipment and Workstations

 The ground floor houses foundational laboratories equipped with modern instruments for basic electronics, digital electronics, and measurement experiments.



Purified drinking water facility, Toilet for Ladies and Gents.

1st Floor Laboratory Overview

First floor facilities (St. Xavier's Technical Institute, Mahim)



Purified drinking water facility, fire extinguisher, and LCD display board are available on the first floor



fire extinguisher , Suggestion and complaint box

Advanced Equipment Setup

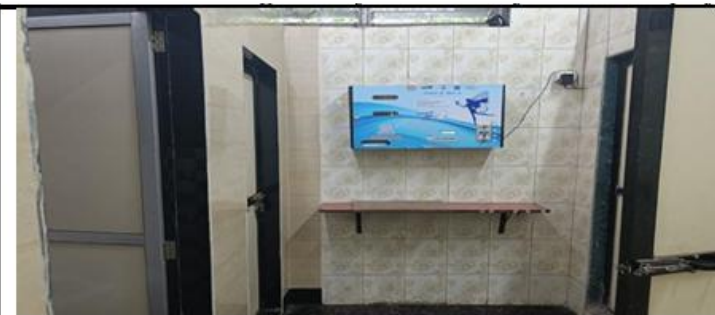


The first floor laboratories support intermediate-level experiments in communication systems, microprocessors, and embedded systems.

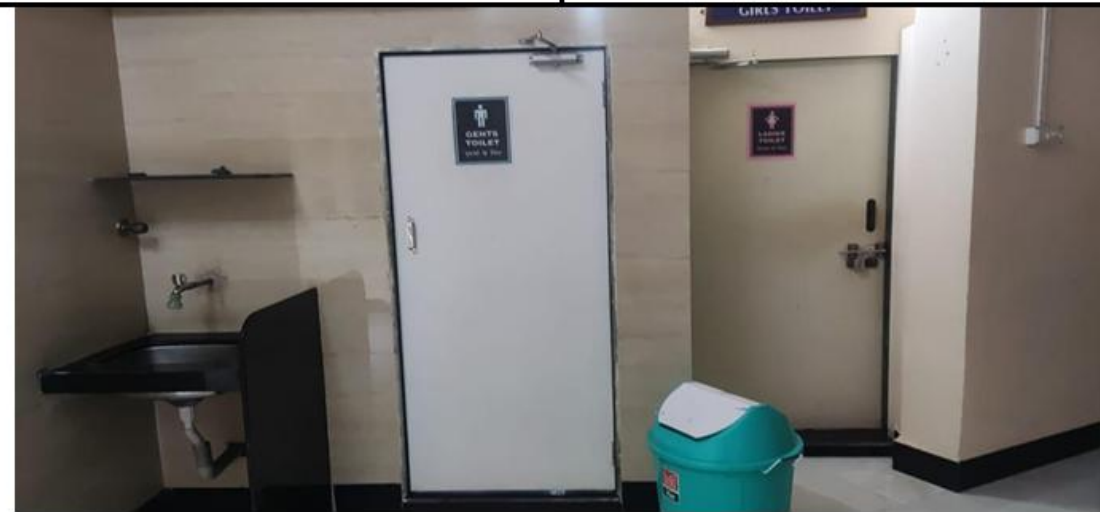
1ST FLOOR



Mirror and locker facility in second floor ladies toilet.



Sanitary napkin Machine is installed in second floor ladies toilet.



Drinking water facility, Toilet for Ladies and Gents.

2nd Floor Laboratory Facilities

Second floor facilities (St. Xavier's Technical Institute, Mahim)



Library Entrance



Books For Reading and Book bank facility in the library



LCD Display, Internet and lockers



Internet & E- Reading Facility in the library , Board Display

Specialized Equipment and Workbenches

i The second floor features specialized laboratories for advanced telecommunications, networking, and IoT experiments with state-of-the-art equipment.



*2nd Floor Laboratory Facilities
Specialized Equipment and Workbenches*



Waiting area, LCD display, board display , Teacher's room , Lockers Facility for students



Sanitary napkin Machine is installed in girl's common room.



Purified drinking water facility, Lockers Facility for students



Girl's common Room

3rd Floor Laboratory Facilities







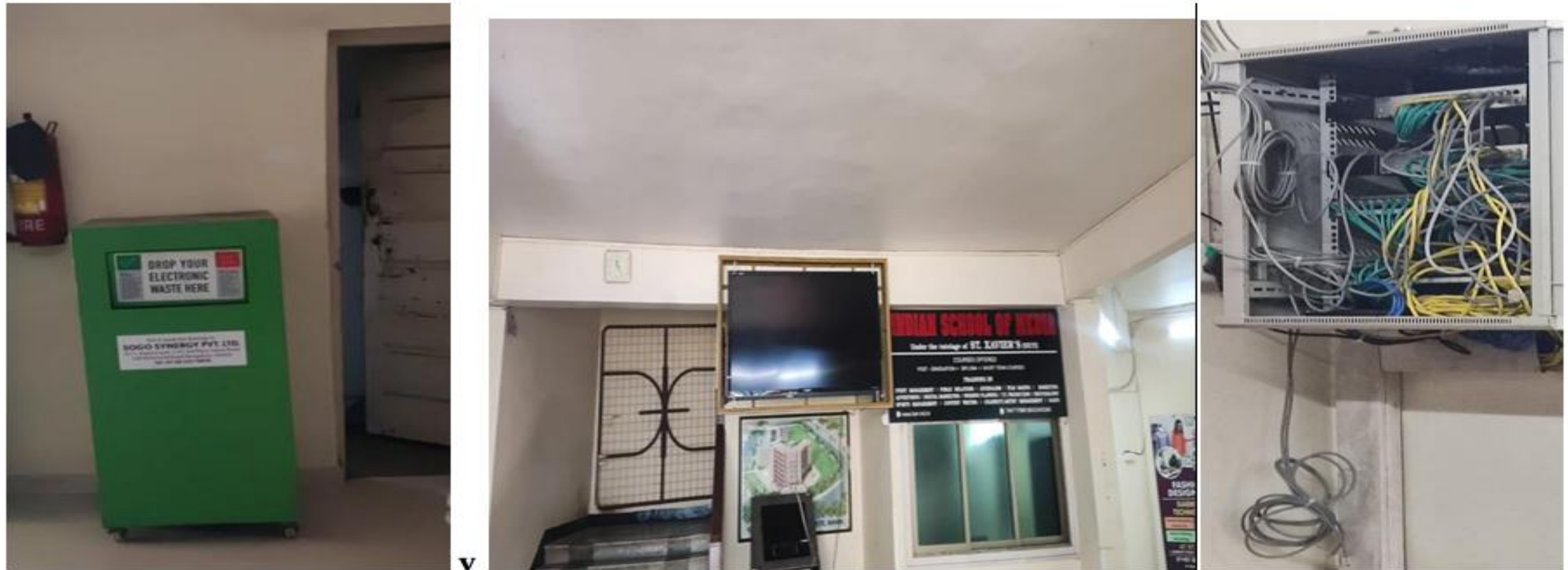



Internet, Smart board and fire extinguisher facility in all Labs.

Project and Research Labs



The third floor houses project laboratories and research facilities supporting final year projects and innovation activities.



E Waste and fire extinguisher facility LCD Display and internet facility on the ground floor

E-Waste Disposal Facilities and Fire Extinguisher Equipment



The department maintains proper e-waste disposal mechanisms and fire safety equipment across all laboratory floors, ensuring a safe and environmentally responsible learning environment.



1st FLOOR



2nd FLOOR

Lab Highlights

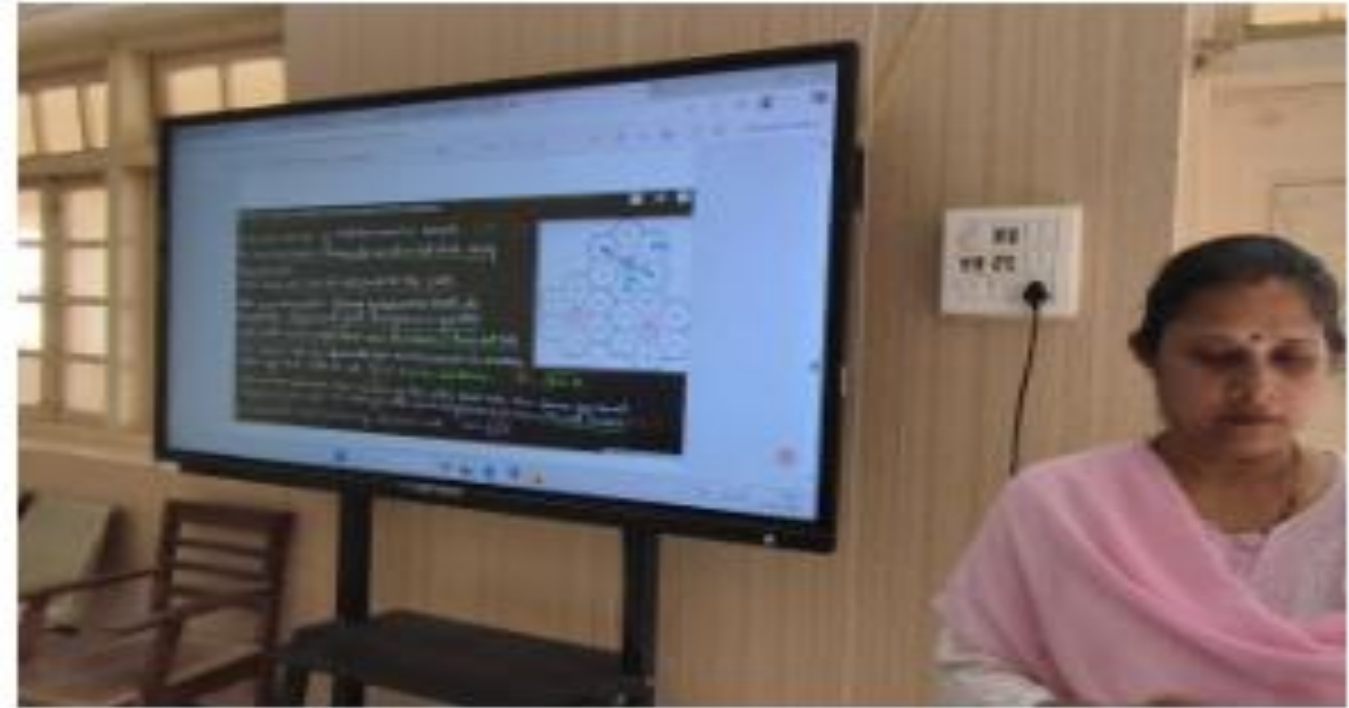
1st Floor Labs:

- Communication Systems Lab
- Microprocessor Lab
- Digital Electronics Lab

2nd Floor Labs:

- Telecommunication Lab
- Measurement and Instrumentation
- IoT & Embedded Systems Lab

All labs equipped with modern instruments and safety equipment meeting AICTE norms.





ST. XAVIER'S TECHNICAL INSTITUTE

Govt. Aided Autonomous Minority Institute, Approved by A.I.C.T.E. New Delhi
Mahim Causeway, Mumbai 400 016. Phone : 2446 9673, 2446 9670
Fax: +91(22) 2446 4482. E-mail : office@xaviertech.com

[MSBTE CODE - 175] [DTE CODE - 3023]

Date: 15th October, 2024

From:

Mr. Claude Colaco
201 Avanti, 19 Central Avenue
Santacruz (W), Mumbai - 400054

To:

Dr. Shivaji Ghungrad
St. Xavier's Technical Institute
Mumbai

Subject: Confirmation of Contribution towards Computer Laboratory

Dear Sir,

I received your request letter dated 1st October 2024 regarding the development and improvement of the Computer Laboratory at St. Xavier's Technical Institute.

I am happy to contribute ₹12,00,000/- (Rupees Twelve Lakhs only) towards the Computer Laboratory. I am also pleased to contribute a further amount of ₹20,00,000/- (Rupees Twenty Lakhs only) towards the same purpose.

I am happy to support this initiative and hope that these contributions will be utilised for the benefit of the students, enabling them to learn and develop their technical skills in a better-equipped laboratory.

I wish the Institute continued success in providing quality education and facilities to its students.

Yours sincerely,

Mr. Claude Colaco

Signature: 

PAN: AACPC3501E

Enclosure: Copy of PAN Card

Amount Received (12 L.)
for Computer Lab.
20
15/10/2024

Date: 1st October, 2024

From:

Dr. Shivaji Ghungrad
Principal
St. Xavier's Technical Institute
Mumbai

To:

Mr. Claude Colaco
201 Avanti, 19 Central Avenue
Santacruz (W), Mumbai - 400054

Subject: Request for Financial Support towards Computer Laboratory

Dear Mr. Colaco,

Greetings from St. Xavier's Technical Institute.

I am writing to request your kind financial support towards the development and upgradation of the Computer Laboratory at our Institute.

The Computer Laboratory plays an important role in providing our students with practical and technical learning opportunities. We are currently working towards improving the laboratory infrastructure and providing our students with better facilities for their academic and practical requirements.

We would be grateful if you would consider supporting this initiative with your generous contribution. Your support will be utilised towards strengthening the Computer Laboratory and enhancing the learning experience of our students.

We sincerely appreciate your consideration and support towards the educational development of our students.

Thank you for your generosity and goodwill towards the Institute.

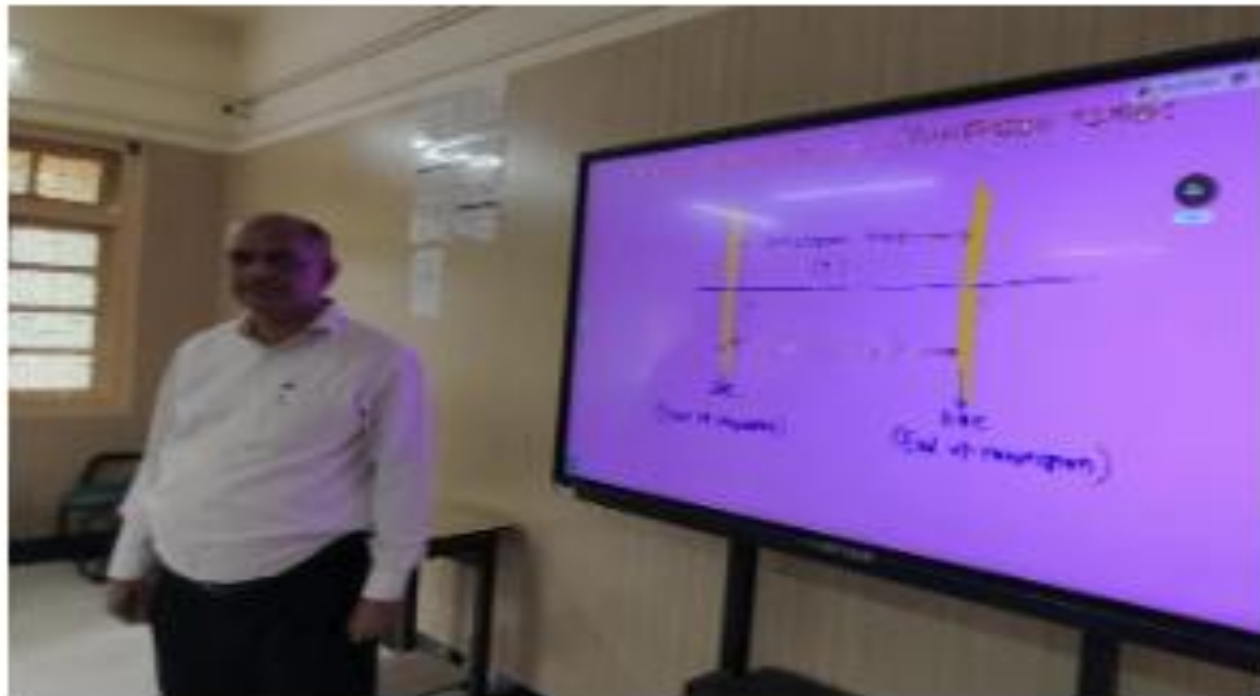
Yours sincerely,

Principal

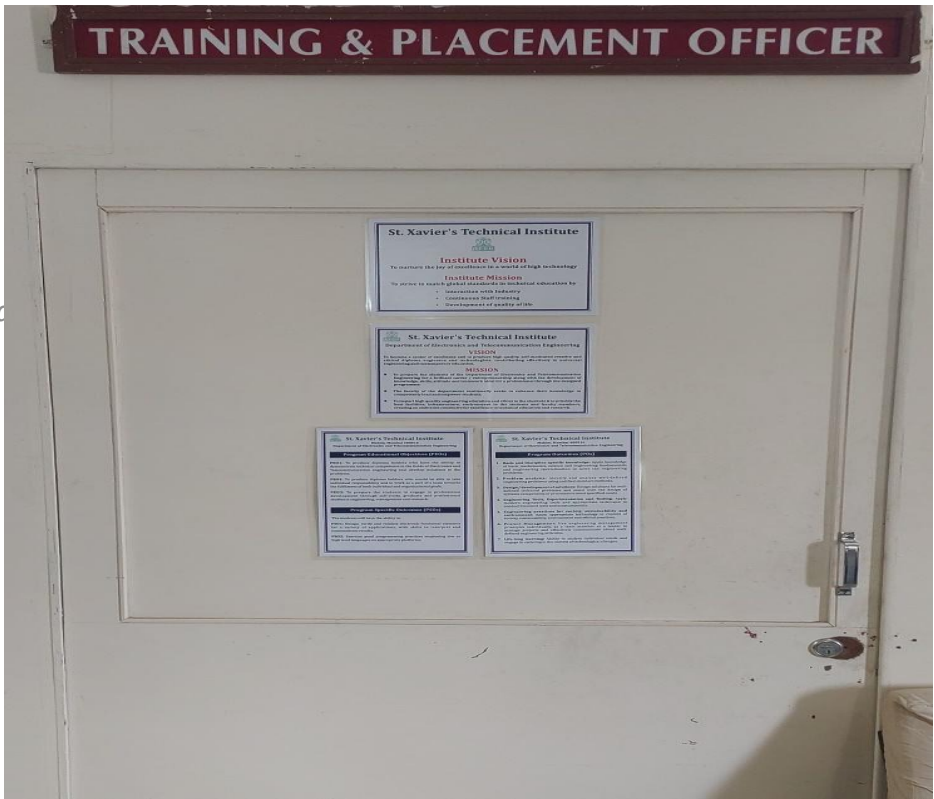


Dr. Shivaji Ghungrad
St. Xavier's Technical Institute
Mumbai

Sponsorship
OK
20
1st Oct. 2024



 Laboratory Facilities - 3rd Floor





Guest Lecture in Communication Lab



Student repairing kit in Control Systems Lab



Students doing Project work in CC2 Lab



Students utilising Communication Lab for making project



CRITERIA 7

CONTINUOUS IMPROVEMENTS



Committed to continuous evaluation, innovation,
and enhancement of processes for excellence.



CRITERION 7	CONTINUOUS IMPROVEMENT	75
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7.1 ACTIONS TAKEN BASED ON THE RESULTS OF EVALUATION OF EACH OF THE POS AND PSOS (25)

POs Attainment Levels and Actions for Improvement- (2023-24)

POs	Target Level	Attainment Level	Observations
PO 1 : Basic and Discipline specific knowledge			
PO 1	2	1.64	Students have partially achieved the desired knowledge outcomes.
1. Review curriculum. 2. Additional Tutorial / Mentoring to support weak students. 3. Remedial classes conducted.			
PO 2 : Problem analysis			
PO 2	2	1.52	Attainment level suggests that students are partially efficient to analyze the problems.
1. Real world examples and case studies are discussed in the classroom teaching. 2. Tutorials.			
PO 3 : Design/ development of solutions			
PO 3	2	0.99	Students are ineffective in design problems and develop effective solutions.
1. Design based assignments. 2. Indirect online learning methods.			

PO 4 : Engineering Tools, Experimentation and Testing			
PO 4	2	1.36	There is a significant gap in practical skills.
1. Incorporated the simulation-based learning to supplement hands-on experiments.			
PO 5 : Engineering practices for society, sustainability and environment			
PO 5	2	1.27	Limited awareness and application considering societal and environmental impacts.
1. Implemented service-learning projects that allow students to address community needs.			
PO 6 : Project Management			
PO 6	2	0.96	Students show limited ability to manage project planning, execution and monitoring.
1. Project based learning and Guest Lectures and Workshops from Industry Professionals. 2. Internship.			
PO 7 : Life-long learning			
PO 7	2	1.01	There is a need to develop learning mindset in students and habits that supports lifelong learning.
1. Self-directed learning opportunities such as MOOCs, Microprojects. 2. Mentorship and Coaching			

PSOs Attainment Levels and Actions for Improvement- (2023-24)

PSOs	Target Level	Attainment Level	Observations
PSO 1 : Design, verify and validate electronic functional elements for a variety of applications, with skills to interpret and communicate results.			
PSO 1	2	1.33	Students are partially meeting expectations in designing, verifying, and validating electronic functional elements.
1. Introduce more hands-on lab sessions and mini-projects focused on design, verification, and validation of electronic circuits and systems to bridge theory-practice gaps. 2. Include training or practice sessions on industry-standard simulation and testing tools (e.g., MATLAB, Multisim, Proteus, LTspice, etc.) to build verification and validation skills.			
PSO 2 : Exercise good programming practices employing low or high level languages on appropriate platforms.			
PSO 2	2	1.33	Students demonstrate basic programming knowledge, but there is limited application of good programming practices across different platforms and languages.
1. Reinforce programming fundamentals through remedial sessions, especially, targeting weak areas like syntax, logic building, and debugging. 2. Emphasize good coding practices—such as proper indentation, comments, modularity, and naming conventions—in all programming courses and lab evaluations.			

St. Xavier's Technical Institute, Mahim, Mumbai					
REMEDIAL Timetable A.Y 2025-26					
LR11	SEMESTER 4-6 (DETE)			(WEF 01/09/2025)	
Timings 3:30 Pm to 4:30 PM in their respective classes					
Class	MON	TUE	WED	THR	FRI
Vth SEM	GE(MH)	DCCN(MH)	MRFOC(RVG)	SMC(JN)	CS(RS)
IIIrd SEM A & B	LIC(VN)	PECOM(SG)	IE(VR)	DE(SNJ)	EMI(AP)
Ist SEM A and B	BE(AG)	M(SD)	M(SD)	FEN(SRB)	—
 Time-table Coordinator Mr. VinayKumar S. Nagalika(Lecturer, DETE)			 H.O.D (DETE) Dr. V. R Rathod		

ST. XAVIER'S TECHNICAL INSTITUTE, MAHIM, MUMBAI					
REMEDIAL TIME-TABLE (ODD SEMESTER A.Y 2024-25) - DETE Department					
Timings for all is 3:30 pm to 4:30 pm w.a.f end of 1st Periodical test (WEF 24/08/24)					
SEMESTER V-A&B	MFOC(KHK)	DCCN(MH)	IM(SBG)	BCS(RS)	SMC(JN)
SEMESTER III-A&B	DE(SNJ)	IE(VR)	EMI(AP)	LIC(VN)	EMI(AP)
SEMESTER I-A&B	FEN(SRB)	BE(AG)	M(SD)	M(SD)	
 Time-table Coordinator VinayKumar S. Nagalika(Lecturer, DETE)			 H.O.D (DETE) Dr. V. R Rathod		

Remedial Attendance Record

Semester	II, Mathematics - II	Academic Year	2025-26
SPN.	Name of Student	Date / Sign	Remark
2503001	Aryan manohar Shelke	22/2/25 23/2/25 24/2/25 25/2/25	
2503008	Sai Sanjay Mandre	22/2/25 23/2/25 24/2/25 25/2/25	
2503005	Aanya Rajesh Mhatre	22/2/25 23/2/25 24/2/25 25/2/25	
2503010			
2503011			
2503012	Ritesh Basik	22/2/25 23/2/25 24/2/25 25/2/25	
2503014	Jonathan Bodi	22/2/25 23/2/25 24/2/25 25/2/25	
2503015			
2503018	Firha Amolkumar Doshi	22/2/25 23/2/25 24/2/25 25/2/25	
2503019	Ira Nisha Yarnale	22/2/25 23/2/25 24/2/25 25/2/25	
2503021	Sahil Ishayam Ghorlake	22/2/25 23/2/25 24/2/25 25/2/25	
2503022	Martkan Anil Ghorpade	22/2/25 23/2/25 24/2/25 25/2/25	
2503024	Riya Gupta	22/2/25 23/2/25 24/2/25 25/2/25	
29			
2503034	Soumya Sushil Kalsulkar	22/2/25 23/2/25 24/2/25 25/2/25	
36			
37			

Signature of Faculty

17/2/2025		ST XAVIER TECHNICAL INSTITUTE, MAHIM, MUMBAI 400018.					
2:30 - 4:30		(DCE) REMEDIAL LECTURE ENGINEERING MATHEMATICS-I					
DCE	day 1	day 2	day 3	day 4	day 5	day 6	day 7
2406001	Leamun	Leamun	Leamun	Leamun			
2406002	Kushinika	Kushinika	Kushinika	Kushinika			
2406003							
2406012							
2406013							
2406021							
2406023							
2406026							
2406035							
2406037							
2406040							
2406045							
2406056							
2406059							
2406060							
2406062							
2406010							
2406052							



PART II

OBE PHILOSOPHY OF THE DEPARTMENT

Our department is committed to **Outcome Based Education (OBE)** that focuses on the holistic development of students by aligning teaching-learning processes with defined outcomes. We strive to empower our students with knowledge, skills, and attitude to meet global challenges and contribute meaningfully to society.



OUTCOME FOCUSED

Defining clear outcomes to ensure meaningful learning and assessments.



STUDENT CENTRIC

Encouraging active learning, critical thinking and problem solving.



CONTINUOUS IMPROVEMENT

Regular evaluation and feedback for quality enhancement.



SOCIETY & INDUSTRY ORIENTED

Preparing competent professionals for real world needs and expectations.



OBE Philosophy of the Department

- **Define Vision statements, Mission statements for the Institute and department**
- **Define PEOs and PSOs**
- **PO & PSO Statements**
- **Define Course Outcomes**
- **Define Course Outcomes with Bloom's Taxonomy for each course**
- **Map topics with Course outcomes**
- **Prepare lecture-wise Course Lesson Plan**
- **Define pedagogical tools for course outcomes delivery**
- **Define rubrics for Tutorial, Practical, Seminar, Micro Project, Final year Project, Internship**
- **Use Learning Management Tool such for Assignments, Quizzes, Tests, course feedback etc.**
- **Measure the attainment of each CO through Direct/Indirect assessments**
- **Track students performance**
- **Identify Gaps in the Curriculum and adopt suitable measures to bridge the Gap**
- **Compare PO/PSO for last 3 academic years and propose remedial actions**
- **Assess the attainment of Program Educational Objectives**

OBE Philosophy

OBE Philosophy
followed by the
Department

1. Syllabus prescribed

2. Formulation of CO statements

3. PO as prescribed by NBA

4. PSOs are formulated by Department

5. Mapping of COs with POs and PSOs

6. Course Planning & Content Delivery

7. Assessment using different tools

8. Course Outcomes (COs) Attainment

9. POs & PSOs Attainment

OBE Philosophy of the Department



THANK YOU

Department of Electronics & Telecommunication

St. Xavier's Technical Institute

Mahim, Mumbai - 400016



Questions & Answers

www.xaviertech.ac.in